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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Medical Topography of the City of Mexico.* By ROBERT NEWTON, M. D., Medical Staff U. S. Army.

THIS city is 19° 25′ north of the equator, and 21° 6′ west longitude from Washington. Its latitude places it in the narrower part of the continent. Its direct distance from the gulf of Mexico is 140 miles, and from the Pacific ocean 170.

The city is situated in a valley surrounded by lofty mountains. This valley, called Tenochtitlan, is about 63 miles in its greatest length and 43 in its greatest breadth. The longitudinal direction is from north to south with a slight deviation to the east. Through its length and about in its middle lies a chain of lakes. Beginning with the most northern, they are respectively named, Zumpango, San Christobal, Tezcoco and Chalco. This chain is about 50 miles long. Four miles west of Tezcoco and near its middle, (in the central part of the valley,) is situated the city of Mexico. Lake Zochimilco, were it not separated from Chalco, by a small strip of land, would be a narrow prolongation of that lake, extending towards the capital. These lakes in the aggregate, occupy nearly one tenth of the surface of the valley. Their waters contain in solution, chloride of sodium, carbonate of soda, and of lime, sulphate of soda, with traces of the nitrates of soda and potassa. Chalco and Zochimilco, being much less strongly impregnated with these salts than the others, are called sweet lakes. During and long after the rainy season, the ground to the south and west of the city, is a marsh. The soil of the plain, in the present age, is not very productive on account of the excess of salines, which cover its surface like frost.

The drinking water of the city, is brought in aqueducts from Santa Fe and Chapultepec. It contains a portion of the chloride of sodium and carbonate of soda; and the Chapultepec water has also in solution a good deal of the carbonate of lime.

The altitude of the city above the sea, is 7459 feet. Consequent upon this elevation is a correspondent rareness of the atmosphere. The following table is the result of barometrical observations made during five years by Mr. Rio de la Loza, a scientific chemist of this city. The measurement is by metres.

	Greatest Altitude.	Least Altitude.
January,	.5909	.5879
February,	.5912	.5882
March,	.5902	.5885
April,	.5898	.5887
May,	.5906	.5896
June,	.5898	.5864
July,	.5885	.5808
August,	.5895	.5847
September,	.5882	.5854
October,	.5912	.5840
November,	.5913	.5852
December,	.5910	.5860

The mercury, therefore, maintains almost constantly an elevation of 23 inches.

Another consequence of the great height above the sea, is a low temperature remarkable for the latitude. According to Humboldt, the mean temperature of this region is 17° centigrade (63° Fah.) He says, "In the capital of Mexico, the centigrade thermometer has been known to fall several degrees below the freezing point; but this is a very rare phenomenon and the winters are generally as mild there as in Naples. In the coldest season, the mean heat of the day, is from 13° to 14° (55° to 57° Fah.) The mean temperature of the whole table-land of Mexico is in general 17° (63° Fah.,) which is equal to the temperature of Rome. "But the annexed table, comprising the observations of five years, by Mr. Rio de la Loza, will be more satisfactory. The original measurement is the centigrade, which I have reduced to the Fahrenheit.

	Maximum.	Minimum.
January,	66.02	46.04
February,	70.16	53.24
March,	73.58	55.76
April,	77.36	66.74
May,	77.54	65.84
June,	76.46	62.60
July,	72.86	61.88
August,	73.58	62.06
September,	70.60	60.08
October,	70.34	53.96
November,	69.08	50.90
December,	66.02	48.96

The atmosphere of the city is very little disturbed by winds. What winds there are, generally blow from the north or northeast. From the middle of June, or a little later, to the end of September, is the wet season, when it rains in the latter part of the day, but

without much thunder and lightning. During the remainder of the year, there is very little rain, and the heavens are generally cloudless.

Constitution and Diseases of Mexicans.

In Stature the Mexicans are very inferior. The Indians are several inches below what is regarded as mediocrity with us. The inclination to degenerate in size, is remarkable in the Mexican horse, jackass, and their product, the mule; and the dog is smaller than the animal of the same species in our own country.

Both the Spanish and Indian Mexican is of a nervous temperament. The body and mind are highly sympathetic with each other. The sensibility of the nervous expansions is keen. The remark which has been made by some of our officers, that Mexicans entertain a great tolerance of pain, is, I am convinced, erroneous. Though the Indian from his taciturnity and reserve, makes an effort to restrain an exhibition of his sufferings, the involuntary expressions which I have witnessed, convince me that his feelings are very acute. Nervous complaints are exceeding common though more especially with the white portion of the community.

The Indian is distinguished for a capacious chest, and a small abdomen.

Among both sexes of the Creoles and among the females of the Indian race, the *adipose* tissue is apt to present a remarkable development.

The Indian exhibits a fine instance of muscular development. The strength he is capable of exerting is superior to that of an European laborer. His great power is particularly manifested in the carrying of burdens. A large chest, small belly and ample muscle, constitute the conformation of men who, without fatigue, can march in a day twice the distance the European is able to accomplish.

The natural intellect of the Creole is certainly good, that of the Indian very contracted. Humboldt thinks, that when the mind of the latter is educated, it manifests a tendency "to subtilize and seize the finest differences in the comparison of objects." He at the same time ascribes to him an almost utter destitution of imagination. Both races possess social feelings susceptible of great refinement. Though their semi-barbarous condition and the unprincipled character of some of their chiefs, have stained their national history with examples of savage ferocity, the real nature of the people is gentle and compassionate. One of the greatest of their faults is *too little independence* of thought and feeling.

The *longevity* of the Spanish portion of the inhabitants is not great. It is quite rare to see a man of very advanced age. The Indians live longer. The annual number of births in the capital, in the mean, for a term of one hundred years, was 5930, and that of deaths, 5050; so that, apart from immigration, the population has had very little tendency to increase.

I now proceed to the consideration of the particular diseases as manifested among the inhabitants of this city.*

Intermittent Fever is by no means a fatal disease. The season of its greatest prevalence is that of April and May.†

Remittent Fever is almost totally unknown.

Typhoid Fever is very common in all seasons, but is most so in April and October. It has the pathognomonic characters which were first noticed by the pathologists of Paris. In the 3d, 9th, and 14th Regiments of Infantry, since their arrival in this city, the fever has prevailed to a very considerable extent.

I arrived here early in December, when I joined the regiment of mounted riflemen. Previously there were a number of cases in the regiment, and the disease had proved fatal to my zealous and indefatigable predecessor, Assistant-Surgeon Suter. But after him, no others in the regiment were affected until the weather became mild.

The cases of typhoid fever which I have seen in the Mexican hospital San Hipolito, and those which have come under my own charge, have been marked by pyrexia; a rose-colored lenticular eruption; tenderness of the bowels, and particularly in the region of the ilio-cœcal valve, with a gurgling sound when pressure is made in the latter region; looseness of the bowels; headache; injected conjunctiva; deafness; more or less stupor; a brown tongue, and a collection of sordes on the gums and teeth; with a belief of the patient that little or nothing was the matter with him. In the most severe cases, there were delirium, subsultus tendinum and involuntary evacuations. Some were accompanied with bronchitic or pleuritic complications. The treatment I have pursued, (and which, in the limited number of cases that have been under my charge, has aways been successful,) has been, to shave the head and apply to it wet cloths, institute a mucilaginous diet, purge the bowels with castor oil once, or more frequently, (if there is much pain in the bowels and the excretions are vitiated,) apply leeches and poultices to the belly, and administer neutral mixture so long as there is preternatural heat and dryness of the skin. If the irritation of the alimentary canal have not been great, I have sometimes given the tartrate of antimony and potassa, with lemonade. When the pleura is affected, I have cupped repeatedly, and endeavored to bring the system under the influence of mercury. I have been studious to cause

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* For my information on this subject, I am most indebted to Dr. Galenzowsky, and Dr. Navarro. The former is one of the most distinguished of the civil practitioners in the city, and of very high professional attainments. The latter, Professor of Surgery in the Military Hospital of Instruction, is a young man of great zeal and talent. In practising with him, at the San Hipolito Hospital, surgical operations on the dead subjects and autopsic inspections, I have derived much benefit from his suggestions.

† It is remarkable that the garrison of Chapultepec were the greatest sufferers from intermittent of all our troops in the valley; at least the fact holds in the two months for which I have had the data necessary to make the comparison. Yet Chapultepec is by far the highest site occupied by our army in the valley. The explanation is, that to the north-east of that place, lies a large marsh, to wit, between it and the city; and that the prevailing winds are from the same direction.

in the patient's room, a constant renewal of the atmosphere, and, during the day, have sometimes removed him to the open air. The shirt and bed-clothes have been frequently changed.

To the *Smallpox* is due the terrible reduction which the Indian population has experienced in some parts of this country since the first entrance of the Spaniards. The disease appears almost exclusively in the form of an epidemic, occurring at very marked intervals. Its ravages were awful in 1763, and still more so in 1779, when in the capital alone it destroyed more than 9000 persons. "A great part of the Mexican youth were cut down that year." In consequence chiefly of the introduction of variolous inoculation, the epidemic of 1797 was less destructive. The *vaccine* inoculation was first introduced in 1804, by Thomas Murphy, who brought the matter from the United States. It was readily submitted to by the inhabitants, who had previously been convinced of the value of an analogous process—inoculation with variolous matter. The introduction of vaccination was matured by a Spanish medical commission, which was despatched by the Government to carry the process into Mexico and other Spanish colonies. Original matter has been obtained from the udders of cows in Atlixco and near Valladolid. Although the smallpox, now that its extension and violence are controlled, by vaccination and rational treatment, is divested of much of its fearfulness, in the *history* of Mexico it stands pre-eminent as the instrument of death. Terrible must have been its ravages to have given occasion to the statement of Motolinia, that in 1520 it carried off one half of the inhabitants.

Yellow Fever does not appear in the capital of the republic, but the *Matlazahuatl*, a disease described as resembling the former, has raged here as an epidemic in times long past. It occurred in the years 1545, 1576, and 1736. Torquemada estimates the mortality caused by it in the first mentioned year at 800,000, and in 1576, at 2,000,000. It is remarkable for not attacking whites and those in whose veins is mingled the blood of the white man.

Diarrhœa and *Dysentery* are, when taken aggregately, charged with a greater mortality than any other disease. Indeed, this mortality amounts to nearly one-fifth of the whole.

That form of *hepatitis* which results in abscess is very common—these abscesses often discharge several pints of pus. It has been found best to make a *very free* external opening to the abscess; nor is it thought necessary to be solicitous about the admission of air, which is not supposed to be injurious. At least, the advantage accruing from maintaining a passage constantly free for the issue of pus, more than counterbalances the injury from the air. In this way, I learn from Dr. Galenzowsky, more than one-half of the cases are cured.

Catarrh and *Bronchitis* are diseases of ordinary occurrence; but *Phthisis Pulmonalis* is very rare. *Vesicular Emphysema* is frequent.

Mexicans have already been stated to be subject to nervous affections. Among these may be specified cephalalgia, epilepsy, neuralgia, paralysis, and chorea.

Calculus is very seldom met with in the city of Mexico. In some other parts of the republic, it is more common.

In respect to *venereal diseases*, they may be stated to be one of the greatest banes of the country. There are few males of middle age in the city of Mexico, who have not been subjects of this disease. Nearly all of the lower class of females, also, have been affected. This is at once an effect and illustration of the immorality of the population. The chancre among the Mexicans is generally of the Hunterian character, and apt to be followed by secondary symptoms. I have frequently heard our medical officers affirm the difficulty of managing venereal affections in this place.

Dropsies are common. *Hemorrhages*, though the fact may seem strange in a country where the external pressure of the atmosphere is slight, are rare.

The inhabitants of this city are much subject to *Pericarditis* and *Endocarditis*, and also to *organic affections* of the *Heart*. Ossification in the vascular system, however, is said not to be unusually frequent.

But one of the most strikingly common diseases in this place, is *Senile Gangrene*. Being present recently at an amputation of the thigh, performed on account of this disease, I extracted the popliteal artery, which clearly demonstrated, in part, the pathology of the affection. In the cardiac portion of the artery is a coagulum of blood; but situated in the peripheral portion, and separated from the coagulum by a narrow section in a state of transition, is a cord of white fibrin. It is to be supposed, that the inner coat of the artery being inflamed caused a coagulum of blood, (as in the analagous case of endocarditis,) which was succeeded by fibrin.

The poor are much affected with *indolent ulcers*, generally situated on the legs. These ulcers are a frequent cause of death.

In walking the streets, one constantly meets persons with *affections of the Eye*. The most common are opacity of the cornea, fibrinous occlusion of the pupil, and inflamed and hypertrophied conjunctiva. Although many cases are exhibited for mendicant purposes, enough others are seen to convince a stranger that the number is extraordinarily large. Inflammations of the cornea and iris, it is well known must be treated promptly and judiciously or the sight will almost certainly be lost by the exudation of coagulable lymph. Now there is probably no more improvident people in the world than the poor of this city. Need we wonder then at the opacities and occlusions? Besides, when we reflect that iritis is frequently produced by syphilis, and that conjunctivitis, as well as inflammation of deeper tissues, is a result of gonorrhœal inoculation and of catarrhal influence, and, moreover, that syphilis, gonorrhœa, and catarrh, are here exceedingly prevalent, we have a most satisfactory explanation.

Considering the fact that close study is not an ordinary phenomenon among Mexicans, *Myopia* is found in the cities of the table-land to an extraordinary extent.

To *diseases of the Skin*, the constitution of the Indian seems rather disinclined. There is, however, one horrible cutaneous affection which is frequently encountered. This is the *Elephantiasis Græca*. There are three forms. The first is characterized by tubercles gen-

erally varying from a quarter, to three quarters of an inch broad; disposed to squareness of shape; projecting, red or livid in the beginning, susceptible of change to a bronze hue; sometimes indolent, at other times more sensitive, and accompanied by a swelling of the subcutaneous cellular tissue; preceded by spots of a variable red; beginning usually at the root of the nose, and extending over the head and upper extremities, then affecting the lower, but seldom occupying the trunk. This is called the tuberculous form. The second, called the anæsthetic, is characterized by a want of sensibility in the extremities of the limbs, and by absorption of the bones. I have seen the auricular and annular fingers as completely removed by absorption as by amputation at the metacarpo-phalangeal articulation, and without any semblance of a cicatrix. The third form was first described by Dr. Lucio, physician to the San Lazaro Hospital in this city, for the accommodation of patients of this disease. It consists principally in the production of red and painful discolorations, which commonly terminate in ulceration. The subjects of this form are called lazarinos. Two or more forms sometimes co-exist in the same individual. Dr. Lucio has discovered in the inspection of such as die from this disease, the frequency of certain alterations in the spleen. The first and second forms may be regarded as incurable. The patients, after having been affected many years without any material derangement of general health, usually die with diarrhœa; and in such cases the mesentery is found to contain deposits of tubercular matter. The San Lazaro Hospital was erected in the year 1811. In the year 1844, it had received in all, 82 women and 123 men. Elephantiasis affects only the poor, and particularly such as are exposed to strong heat and humidity. All the patients in this city come from the western side, though I am not aware of any explanation of this fact. The subjects are from 15 to 40 years old.

Looking for the local *causes* of disease, the mind immediately recurs to the large expanse of surface in the valley of Mexico, which is annually flooded by the rains and dried during the dry season. The portion subject to these changes is not less than one-tenth of the whole valley. Here is a grand laboratory for the production of intermittent miasmata. These, however, do not appear to be evolved in the highest amount until the close of the dry season, when the heat is greatest, and the superimposed layer of water has been evaporated.

Another cause of disease is the humidity of the atmosphere during the wet season, when heavy rains occur every day, frequently flooding the streets of the city. The perspiration of the body not being duly evaporated, it becomes necessary that the supply of heat should be diminished to prevent the temperature of the system rising above the normal standard. This supply is founded in the conversion of the carbon of the system into carbonic acid gas, and can be diminished in several different ways. It may be effected by the deposition of carbon in the form of fat, a process, however, which nature is frequently indisposed to adopt. Then the supply of carbon to the system may be curtailed by reducing the amount of food,

which is the appropriate mode of overcoming the difficulty. Nature indicates this course by lessening the appetite in such cases. But when the constitution is disinclined to the formation of fat, and when the appetite is artificially stimulated as it is in Mexico by the constant and excessive abuse of alcoholic drinks, red pepper and garlic, then the superabundant carbon remains only to be eliminated by the liver as an element of the bile. The excitement of the liver necessary for this extraordinary labor, disposes it to inflammation. The increased vascularity of the intestines required for a supply of blood by the portal circle, sufficient for the extraordinary secretion of bile, renders the intestinal canal also predisposed to inflammation. This predisposition of the canal is increased by the irritation attending the reception of the unusual amount of bile and of fruits, here almost unlimited in variety, and some of which are not very healthful. Now if a man in the condition just described, with his system overheated and debilitated, go out doors into the rain and wet his feet with the water which has flooded the streets, the surface of the body is too rapidly cooled, and the liver or bowels, already excited, become almost unavoidably the seat of inflammation. We have thus no difficulty in understanding why hepatitis, dysentery and diarrhœa are here so frequent.

The very great difference in the temperature of day and night, and of sunshine and shade, with the thin mode of dressing, is a sufficient cause for the prevalence of catarrhs and bronchitis, as well as other internal inflammations. It is true, that the contiguity of the lakes has a tendency to equalize the temperature of day and night; but there are other causes, which render it extremely unequal. These are, the clearness and stillness of the atmosphere; the want of trees and other projecting bodies; and finally, the rareness of the atmosphere, which, in consequence of this rareness, has less power to maintain an equilibrium in the heat of the body, and leaves it more exclusively exposed to the influence of radiated caloric. The latter agency, in connection with the thickness of the walls of houses, renders the change of temperature very great in passing from the sun into the house. Drafts of air, however, have, for the same reason, less potent influences here than in a denser atmosphere.

To the rareness of the atmosphere, also, as may be reasonably imagined, should be attributed the prevalence of vesicular emphysema.

Mexico is an exceedingly filthy city. The poor have no privies, and their excrement is at once deposited in the open street. This outrage, though most practised in the suburbs where the poor reside, is yet much enacted in the central thoroughfares. Some years ago the city authorities directed the Board of Health to report upon the best mode of obviating the nuisance, to which they imputed in part the typhoid fever which is prevalent in Mexico. The Board were in favor of collecting and burning the filth and then removing the residuum beyond the town. But the plan does not appear to have been carried into execution. What makes the filth here more injurious, is, that the stillness of the atmosphere allows the exhalations to become concentrated. From custom, also, the Mexican popula-

tion permit their bodies to become excessively dirty. The lower order of people are almost universally affected with lice, and fleas are the inmates of the palace as well as the hovel.

The want of occupation of mind and body and the artificial life of the ladies, are causes of the nervous complaints to which they are subject. Another powerful cause, is the custom of smoking, prevalent among females as well as males, and which renders them both, alike nervous. Smoking, however, is now somewhat unfashionable among the ladies of the most elevated class.

Owing to the comparative absence of occupations requiring a constrained posture of the body, and the practice of keeping open the doors and windows, the population are exempt in a great degree from the deposition of tubercular matter in the lungs, which seems to have a dependence on an habitual imperfection in the oxygenation of the blood.

Having before us, as we do, an instance on so grand a scale, of the amalgamation of two totally distinct races, it may be useful to investigate the effects. The product of a white and an Indian is called a mestizo. This class, however, is the result of so much mixture, and remixture, and intermixture, that in most cases it would require a very nice calculation to ascertain the exact value respectively of the original factors. Inasmuch, also, as Humboldt, in the beginning of this century, estimated the Mulatto population at 10,000, or one-tenth of the whole, it is evident that a notable quantity of Negro blood must exist—mingled up and down. No description, therefore, can strictly apply to all the individuals of the class; but a mean may be taken, and latitude given to individual deviations. Since the amount also of negro blood is comparatively small, it may philosophically be overlooked in the comparison instituted between the result of the amalgamation and the elements. In physical constitution, then, the mestizo possesses a clay-colored complexion, very slightly inclined to brown; leanness; slightness of muscular development; extreme pallor of the lips and face; high cheek bones, and hollow cheeks; small under-jaw; low forehead; straight, black hair; and an expression of countenance at once gloomy, sinister, unintellectual and indolent. His common vices of constitution are, anæmia and scrofula. His moral character is correctly illustrated by his countenance. He inherits the deceitfulness and want of good principle of the white, with the mental stupidity of his copper-colored parent. He retains the faults of each; but is more indolent and revengeful than either. His bodily strength is a miserable degeneration from both. The better portion of this class enjoy in society the position of mechanics, servants, and low shop-keepers; but the worst portion are identical with the class known here by the name of leperos, and among the Americans by the contemptuous name of greasers. The lepero, half-clad, wanders idly through the streets, disgusting from his filth, hateful from his crimes, but pitiable from his wretchedness. At night he is ready to perpetrate a secret assassination; by day, to swell a public tumult against the government.

In comparing the results of the amalgamation of two distinct races

in Mexico with those of the same thing in the United States, we find the physical and moral consequences much alike. The scrofulous vitiation, in particular, is common to both cases.

In taking leave of this subject, I must acknowledge the great liability there is to error in estimating the moral and intellectual qualities of a race. My statements are meant to be taken with many exceptions. And, after all, while I am convinced of the truth of what I have alleged, the recollection of kind actions on the part of mestizoes which I have witnessed and even received makes the enunciation of the truth painful.

Remarks on certain Articles of the Mexican Materia Medica.

The valley of Mexico contains a number of warm springs, among which are those of Peñon de los Bañons, Guadaloupe, and Atotonilco. The two former places are near the capital. The waters of these springs contain carbonic acid, common salt, and alkaline carbonates. Those of Guadaloupe are ferruginous, and also contain cathartic salts. Some of the springs at Atotonilco contain sulphuretted hydrogen.

The *Leeches* of this country are objectionable on several accounts. They are apt to induce stupor or coma.

The *Maguey* (Agave Americana) is applied in this country to a great variety of uses. The juice when fermented, constitutes pulque, the popular drink of the country. This liquor is a powerful diuretic, diaphoretic, stomachic, astringent, tonic and anti-scorbutic. A balsam is prepared from the maguey, which is used here as a vulnerary. The prickly leaves roasted, yield a juice, which, mixed with sugar, forms a syrup valuable in pectoral inflammations. The gum which flows spontaneously from the leaves, is identical with gum-arabic. A great number of observations have been made, which in the estimation of the people of the country, have decided the root to be a singular specific for syphilis.

The root of the *Begonia* (Begonia Balmisiana) has a bitter, revolting taste, and when given in great quantity, is a drastic cathartic; but in moderate doses, purges with mildness. It is an emmenagogue when menstruation is inactive from debility of the uterus; and, like the maguey, is anti-syphilitic; its visible operation, however, being purgative, while that of the maguey is diuretic and diaphoretic. Its dose is about 20 grains.

The seeds of the *Chia* (Salvia Hispanica,) are mucilaginous, and form, with sweetened water, a refreshing beverage, very much used here by people in perfect health. The plant abounds in the tierra caliente, flourishes also very well in more temperate regions.

Epazote, or Epazotl, (Chenopodium Ambrosioides,) is known in Europe by the name of *Tea of Mexico.* It is used here for a variety of culinary preparations, but when the infusion is employed as a medicine, it excites powerfully the skin, kidneys, and uterus. It is also carminative and stomachic. It has been used in chronic catarrhs. It is employed in the United States indiscriminately with chenopod, anthelmint.

The root of the *viola verticillata,* is similar in properties to ipecac.

The *Maravilla,* (Mirabilis Jalapa,) when taken in doses of two drachms, acts as a purgative. Although stated by some authors to be

the source of the jalap, it is entirely different from the Convolvulus Jalapa, from which that is derived.

The *Banana*, so well known, is used very commonly as an article of food. It is probable there is no other plant, which, when cultivated, will cause the same amount of land to yield so much alimentary substance. I mention it here more particularly in reference to the injurious—almost poisonous effects produced by the use of brandy after fresh bananas. Much of the cholera and dysentery of our soldiers, has, doubtless, been more or less excited in this manner. The bad effects of this combination, are not generally known among Americans.

Mezquite, (Mimosa Circinalis,) is a species of acacia, as this term was formerly used, and yields a gum like the gum arabic.

Palancapatli, (Solidago Montana,) is reputed to be anti-syphilitic.

The *Pineapple* is used here in nephritic affections and suppression of urine. It is held also to be a powerful anthelmintic, and is used to expel lumbrici.

The seeds of the Pinones de Indias, are a drastic cathartic. The plant resembles the Croton Tiglium.

Tragacanto del pais, (Cactus Juna et Cactus Ophuntia,) is similar to the concretion of the Astragalus Tragacantha.

Yerba del cancer de Mejico, (Gomphrena procumbens.) One kind of this plant grows in the pedrigal by Contreras. It is used with success for the healing of cancerous sores, or at least sores supposed to be cancerous.

Yerba del negro, (Malva angustifolia,) is produced near Huamantla, and is used in rheumatism.

The Medical Profession in Mexico.

The most palmy days of medical science in Mexico were about fourteen years ago, under the patronage of Farias.

There are in the republic four medical colleges, situated respectively in Mexico, Puebla, Valladolid, and Guadalajara. The capital contains now, probably about seventy medical students, and the number does not vary much from this in times of peace. The course of instruction in the medical colleges, embraces a term of five years. The preliminary course required, comprehends among other branches, most of the natural sciences, French and Latin, and within a few years the English language. The character of the profession is rapidly improving; the older physicians, with the exception of such as have been educated abroad, being very ignorant. No one now is allowed to enter upon the practice of the medical profession without an examination into his qualifications by a board of professional men. Some years ago, a medical monthly periodical was published in this city, but it contained few original articles, and did not survive long. It was the second attempt of the kind.

The fees of medical men are fixed by law. They are higher than in the United States; but living is also very high, and there are scarcely sufficient inducements for an American physician to settle here. There have, however, been many foreign medical men, who have gained a reputation of the highest character. Some members of the profession in Mexico, are of very great merit.

STATEMENT

Of those that died in the City of Mexico in the Year 1844, according to the Registers of the fourteen Parishes, Hospitals, and Asylums; with a table of the Months, Diseases and Sexes.

	Apoplexy.	Asphyxia.	Aneurism and Diseases of the Heart.	Angina.	Cancer.	Contusions and Wounds.	Cholera Morbus.	Dysentery.	Diarrhœa.	Eclampsia (Inflammatory Convulsions.)	Hectic Diseases (Tabes Mesenterica.)	Epilepsy.	Intemperance.	Scarlatina.	Typhoid Fever.	Hepatitis.	Dropsy.	Intermittents.	Gastric Congestion.	Natural Death.	Sudden Death.	Ostitis (Inflammation of the Bones.)	Childbirth and Puerperal Diseases.	Hanged.	Pneumonia and Pleurisy.	Rheumatism and Gout.	Phthisis Pulmonalis.	Simple Ulcers.	Smallpox.	Unclassified Diseases.	Men.	Women.	Total.
January,	28	4	8	0	0	23	2	27	38	38	11	0	0	2	35	6	39	3	18	4	8	2	5	0	62	1	11	13	2	108	259	236	495
February,	12	2	10	2	4	18	1	24	45	24	6	0	0	8	39	11	35	3	11	4	6	0	4	0	75	1	13	5	0	86	228	221	449
March,	9	3	3	6	6	12	0	41	53	39	6	0	0	6	44	9	31	3	19	7	4	0	2	0	67	0	10	7	1	97	234	253	487
April,	13	4	6	8	1	13	0	29	34	43	8	2	0	19	53	6	30	2	17	6	7	0	0	4	52	1	12	8	3	106	258	227	485
May,	17	1	9	15	4	12	0	31	37	27	4	2	0	36	49	13	24	2	14	5	6	0	2	4	51	1	8	14	4	95	242	236	478
June,	21	1	4	4	8	10	0	49	43	30	2	1	0	22	38	7	27	2	21	4	5	0	0	5	30	0	6	1	2	126	230	236	466
July,	20	3	8	3	2	13	0	70	61	39	11	1	0	8	34	9	30	5	18	5	6	0	0	7	55	2	13	6	1	140	267	299	566
August,	15	3	8	6	6	12	0	79	76	27	12	1	0	8	32	6	32	1	29	6	7	2	0	5	54	0	7	12	1	135	271	294	565
September,	13	7	4	1	5	10	0	60	67	52	8	1	0	12	36	11	41	1	19	7	2	6	0	2	38	0	8	12	0	99	269	251	520
October,	17	5	5	2	9	17	0	46	55	29	5	3	0	1	50	3	43	6	11	2	5	0	0	4	44	0	11	8	0	125	258	248	506
November,	18	1	2	3	2	15	1	55	52	44	11	0	0	10	32	6	33	11	13	3	8	4	0	5	88	2	6	19	0	129	288	282	570
December,	17	3	3	4	4	26	3	22	50	48	7	1	0	6	29	10	39	2	17	6	4	0	5	0	60	0	11	3	1	116	263	237	500
TOTAL,	200	37	65	58	51	181	7	533	611	440	91	9	0	132	461	97	404	41	207	59	60	3	50	3	676	8	116	108	15	1362	3067	3020	6087

RESUMÉ *of the Deaths in the City of Mexico, for the Year* 1844.

	Males.	Females.	Total.
In the Parishes, Hospitals and Asylums, - - - - - - - -	3067	3020	6087
In the Convents from which the Board of Health receive information, - - -	5	30	35
Total, - - - - - -	3072	3050	6122

Secretary's Office of the Council of Health of the City of Mexico, Jan. 15, 1845.—ROBREDO.

ART. II.—*On the Anatomical and Physiological History of those Affections which are called Inflammatory.* By J. B. PIGNÉ, Late Curator of the Dupuytren Museum, Ex-Vice-President of the Anatomical Society, Professor of Pathological Anatomy, etc. etc.*

BEFORE forming an opinion of the sketch which we are going to draw, we beg the reader to take the pains to obtain an entire knowledge of it; for some of our propositions taken singly might, at the first glance, appear false; nevertheless, we are persuaded that when considered in connexion they will mutually sustain each other, and convey to his mind the same conviction which animates us.

ANATOMICAL CHARACTERISTICS.

1st. *All the inflamed organs increase in size.* This law has no exceptions. This increase in size, which varies according to the intensity of the disease, is scarcely perceptible in those organs whose texture is thick and close. In general it is much more considerable when the organ affected is at the same time rich in blood-vessels, and where the normal physiological functions are most active; it is remarkable in the testicle, which increases four or five times in size; and the lungs, which receive strong marks from the ribs by which they are compressed; it is particularly evident when an organ being but partially inflamed, the healthy portion may then serve for comparison as in hepatitis, &c., &c.

2d. *The specific weight of an inflamed organ is remarkably increased.* This increase in weight being as much greater as the organ in its normal state was lighter, it happens that the absolute weight of all the inflamed organs is nearly the same, a determined portion of an inflamed lung is nearly as heavy as an equal portion of a liver equally inflamed, &c., in a word under the influence of inflammation, the specific weight increases, but the differences of the absolute weight disappears.

These two phenomena (*increase in size* and *increase in weight*) are not owing solely to the stagnation of the blood; they depend above all upon a particular exudation, the formation of which we shall consider at another time.

3d. *Every inflamed organ becomes more friable.* This friability is a constant characteristic of this affection, without it there can be no inflammation. From the moment the affection commences, the friability commences; it increases with it and disappears completely with it. It proceeds from a diminution of the cohesion of the tissues and is united with an augmentation of their density. It is thus that the lungs, the liver, the muscles, &c., rendered more compact by inflammation, appear hardened, yet, at the same time, they yield under the slightest pressure of the finger; in consequence of this friability, the mem-

* [For a translation of the following communication from Prof. Pigné, now a resident in this country, and at present in Louisiana, we are indebted to L. A. Sayre, M. D., Prosector to the Professor of Surgery in the College of Physicians and Surgeons of this city.—ED. *New-York Jour. of Med.*]

branous tissues lose their elasticity and tear readily. This friability is as much greater in proportion to the length of time the inflammation has lasted without losing its intensity; but we must not forget that this friability does not cause a disorganization of the tissues, and they regain at length their structure and their functions: neither must it be confounded with the softening of which we shall treat hereafter.

4th. *The arterial vascularity is augmented*, and this increase is manifested in three very decided ways. 1st. The vessels already existing acquire a greater size, so that those which, in their normal state could not admit the globules of blood, admit them during inflammation. 2d. New vessels are formed which possess all the properties of the normal vessels. 3d. The vessels primarily existing have a great tendency to elongate themselves, they become rectilinearly tortuous, and this elongation permits them to extend and establish communications between the neighboring organs.

As to *venous vascularity*, it seldom undergoes any modification and when it does, it is from diminution. This happens in those cases where the capillary veins are inflamed, for then they are obliterated. From this it is evident there must be an obstruction of blood, since the arteries which are more numerous and much larger, bring more blood, whilst the veins, never increasing and much smaller, cannot carry back to the heart the whole quantity of arterial blood which an inflamed organ receives.

5th. *In the inflamed organs the normal color is always modified.* The organ ordinarily takes a rose tint, a cherry color. The different shades with which we meet, are all those shades which separate the most delicate rose color from the deepest red or the darkest blue; nevertheless in some special organs we meet with some special colorings; it is thus in iritis—it is a color which is not fixed, but it is never red. One would say it had been formed of several colors mixed together, or badly washed out with a sponge. So in all the transparent organs in the normal state, the color is white; much more opaque when the inflammation has continued a long time with a certain degree of intensity; this we see in inflammations of serous tissues, synovial membranes, transparent cornea, &c., &c.

6th. *The composition of the blood alters*, and this alteration falls principally upon the fibrine, which is increased in a greater or less quantity according to the importance of the organs affected, the age of the subject and the intensity of the inflammation. The blood has also a great tendency to separate into two parts, one liquid the other solid. It is to the re-union of these two characters that the formation of clotted blood is owing, and the buffy coat.

7th. *Every inflamed organ becomes filled with a greater or less quantity of liquids.* These, transparent at first, soon become opaque, if the inflammation continues with a certain degree of intensity. These liquids are those which serve, according to the case, for the production of pus, and the formation of pseudo-membranous tissues, granulations, &c., &c.

This exudation is the result of the stagnation of the blood, owing

to the augmentation of the arterial system; we know, therefore, that whenever there is any obstacle to the return of the blood, its serous particles are transfused amongst the vessels and fill the surrounding tissues.

Reflections.

Such are the anatomical characteristics of inflammation. It is not possible for inflammation to exist without their appearance, and the moment they exist simultaneously there is inflammation. *A number of alterations* might cause the solitary appearance of any one of them, but none have the property of producing them simultaneously except inflammation.

Amongst these characteristics, one alone begins with inflammation, increases with it, diminishes when it diminishes, and disappears when it disappears. This is *friability*. The others, though commencing with inflammation, and generally disappearing completely when it arrives at its end, may nevertheless continue a long time after; such are *weight*, *vascularity*, *coloration*, and exudation. But if the inflammation advance rapidly, if it arrive in some hours at its apogee, and bring death quickly; as for example, in acute peritonitis, then all the anatomical phenomena disappear and at the autopsy, no trace can be discovered: in other words, the existence of anatomical characteristics is subordinate to the duration of the inflammation; and the conclusion drawn from this observation is, that a true inflammation should be treated vigorously and checked promptly, if you would prevent disorganization in a permanent manner.

One of these phenomena belongs especially to the first period; that is, the *modification of the blood*, of which I have spoken; it is but momentary, and disappears sometimes at the end of a few hours, but ordinarily at the end of three or four days. At the commencement of the disease, it is altogether local, and is not met with, but in the blood of the part affected. It is only later, often at the end of two or three days, that it becomes general, and may be perceived in the blood from the vein. This increase of *fibrine*, presents one peculiarity which I have remarked from the beginning, and which I can prove by several chemists; which is, that *we do not meet with it except in venous blood*, whilst in *arterial blood* we find *less* than in the normal state.

One last observation, regarding these anatomical characteristics, in relation to the *coloring* of the inflamed parts. It has been said that this coloring was paler in the organs, which are rich in lymphatic vessels, redder when the arterial capillary vessels prevail, and violet where the venous capillary system is the most abundant. This is manifestly an error; for in the same organ, upon the same individual, we sometimes meet all these shades united, from the rose to the deepest blue. It is evident, on the contrary, that the modifications in the color, depend upon the intensity and duration of the obstruction of blood: in truth, the result of this duration is, that the blood loses its liquids which filter into the neighboring tissues, the coloring matter remains alone in the vessels, and it experiences a modification analogous to that which the arterial blood undergoes

normally in the tissues, that is to say, it becomes venous—it is owing to these changes that the coloring becomes more or less dark.

Physiological Characteristics.

1st. *The sensibility common to a diseased organ is augmented* to that extent, that the degree of irritation to which every organ is subjected in its normal state, cannot be borne. It is thus that the presence of light is very painful in ophthalmia; that of sound in otitis. Of aliments and beverages in diseases of the œsophagus, of urine in those of the urethra, &c. &c. This sensibility requires an *external influence* for its manifestation, from which circumstance it is never spontaneous—it is *the same* as the *normal sensibility*, only it is exaggerated; it does not exist during inflammation in those organs which are insensible in their normal state; it is also much greater when the affected organs contain many nerves. Compression never relieves it, sometimes, even, increases it. It is produced, it is true, with inflammation, but it often remains a long time after that has terminated. Generally, this augmentation of insensibility is altogether local, but sometimes it becomes general, and then takes the name of *irritability*. In these cases, the sick are very susceptible to the influence of external agents; all their senses acquire an exceeding delicacy. Hearing is developed in such a manner, as to enable them to hear very low sounds, even at a great distance; their sight is sometimes prodigiously acute, and their smell is affected by even very slight odors, &c. This irritability occurs principally in very nervous persons, where the inflammation has lasted a long time, with a certain degree of intensity. It is not rare to see sick persons sink from too great a degree of sensibility, as we see others die from the loss of too much blood.

2d. *Pain is often the first phenomenon which is manifested.* Often, too, it is the only one which is observable in inflammations of those organs which are deeply seated. It is fixed and permanent, very variable in its character: in general, it is dull in the parenchyma, deep in the serous, slight in the mucous, shooting and pulsating in the cellular tissue, grinding in the bony system, &c. It commences with inflammation, increases with it, diminishes with it, and disappears with it; it may, if we may so speak, serve as a thermometer for inflammation. It is developed spontaneously, and has no need of any external agent for its manifestation; it is much more severe, when the inflammation is more intense; it is also more severe, when the inflamed organs contain *fewer* nerves. Compression almost always diminishes it, and often causes it to disappear completely; it is always *local*, and confined to the part inflamed.

From what I have just said, it can be seen that *pain* and *increase of sensibility* are two different phenomena. I regard one as being simply an exaggeration of a physiological phenomenon, and the other as, if we may so say, *a new function*, a new phenomenon, a stranger to the normal organization, and *brought about by inflammation.* It is not, however, a special peculiarity of inflammation, because there are a number of organic maladies, which have also the property of causing pain. I would only remark that in the same

organ, pain varies according to the nature of the disease which affects it; in the bony system, for instance, it is permanent and grinding, under the influence of inflammation; on the contrary, it is in the same tissue, shooting and remittent under the influence of cancer; dull and continuing only during the after part of the day and night, in syphilis, &c., &c.: whilst, if pain were the result of the same act, that is to say, of the compression of the nervous system, for example, it would be always the same while it remained in the same organ. I will add, relative to inflammation, that the increase of sensibility from any cause whatever, may produce inflammation; whilst inflammatory pain is always caused by inflammation.

3d. *Heat is increased in every inflamed organ.*—Although after the experiments of Hunter, it appeared that the temperature did not seem to rise above that of the blood in the heart, it nevertheless increases from 1½° to 2° *Reaumur*, in the parts situated far from the centre of circulation. This heat, which increases with inflammation, is almost always felt by the patient, perceptible to the hand of the physician and even to the thermometer; it is not always as great as it appears to the patient; and also it varies according to the nature and intensity of the inflammation, and according to the structure of the affected organ.

This augmentation of heat is entirely *local*, during the first period of inflammation, but at the end of two or three days, it extends over the whole economy, and it is not rare to see the general temperature of the body, which in the normal state was from 31° to 34° *Reaumur's*, rise to 37°, and even to 44°. It rarely lasts in a general manner more than 12 to15 hours, without being accompanied with very great weakness.

4th. *Pulsations in an inflamed organ are quicker and stronger.*—The patient feels it, the finger of the physician perceives it, his eye sees it in some cases. The same phenomena are observed in the great arterial trunks which conduct the blood to the organ affected. It is thus in meningitis, the pulsation of the carotid artery is stronger than that of the radial, in the phlegmon of an inferior extremity the pulsation of the crural of the side affected is stronger than that of the crural of the healthy side, &c. Moreover, these pulsations *appear* more frequent. We must not be deceived by this phenomena; the pulsations are not more *frequent* in the inflamed organ than in the rest of the body, as some pathologists have written. These pulsations are the result of the contraction of the heart, and to admit that they are more frequent in one part of the body than in another would be to admit that the heart beats more frequently for one part than for another, which would be absurd. But the thickening of the blood in the vessels of the inflamed part, diminishes the duration of the passage of the blood in this region, and the blood having struck against the obstacle ebbs, which prolongs its undulations; again this column of blood having received an impulse sufficient to send it to the capillary vessels, meets with an obstacle owing to the stagnation of the blood, exhausts its shock against its sides, which gives to each pulsation greater *strength*.

It is, therefore, true to say, that the pulsations of the arteries in the inflamed part are more *energetic* and more *prolonged*, but it is false to say, that they are more frequent than in other parts of the body.

5th. *The normal secretions of the inflamed organ are considerably modified during the disease.* They are generally *diminished* and sometimes *destroyed* in the first period, and remarkably increased in the second. It is thus that we observe a species of dryness during the first period of pleurisy, pericarditis, peritonitis, &c., and to this dryness succeeds an abundant secretion of serosity; it is thus in inflammation of the skin, the salivary glands, the intestines, the kidneys, the liver, &c., we find at first a remarkable diminution in the secretion of perspiration, of saliva, of intestinal mucous, of urine, of bile, &c., and soon after an abundant secretion of these same liquids takes place. There is yet more, which is, when a morbid secretion exists, exacerbation which occurs in the progress of the inflammation, is marked by a stoppage in the secretion, which nevertheless recommences directly; it is thus if an ulcer inflames, then the suppuration it furnished is at first suppressed; then it returns and most frequently changes its nature. We may generalize this idea and say, that in all organs affected with inflammation, the productive function diminishes at first, but soon after becomes more active. The brain itself, the organ producing thought, does not escape this law, for in the first period of its inflammation we see it work lazily; but soon so prodigious an activity returns to it, that it might seem a disorder; but let no one be deceived, the disorder is only apparent. The cause is, that the ideas succeed each other with such abundance and rapidity that speech is too slow to suffice for their manifestation; thus the patient speaks constantly, commences many sentences, often finishes none; that which appears to the listener an incoherence of ideas, is an incoherence which exists in the tongue, but does not exist in the brain.

The *modification* in *quantity*, which one meets with in these two periods of inflammation, sometimes bears also upon the *quality* of the secretions, but only where the inflammation has continued a *long time*. It is thus in parotitis, the saliva has a metallic taste quite peculiar; in coryza, the nasal mucous becomes irritating; in nephritis, the urine becomes alkaline, albuminous, &c., in enteritis, the mucus is serous, sometimes acrid, sometimes salt, &c. It is not even rare to see this exhalation carried to that point, that almost pure blood, is perspired with the products of the secretion. This exaggeration which almost always constitutes a happy crisis, when it is confined to a small surface, as in coryza, iritis, &c. &c., is often fatal when it is extended over a large surface, as in enteritis.

6th. *Absorption is considerably augmented in the first period of inflammation, and considerably diminished in the second.*—It is even completely suppressed when the affection is carried to a very great degree.

REFLECTIONS.

If we compare the modifications which take place in secretion

with those which are seen in absorption, we see that in the first period there is a diminution in the secretion, and an augmentation in the absorption; whilst in the second period, there is an augmentation in the secretion, and a diminution in the absorption. We also find in the first period a dryness in the inflamed organs; it is to this dryness that the itching is owing which precedes coryza; the noise, the friction at the commencement of pericarditis, pleurisy, peritonitis; constipation (owing to the absence of mucus,) which precedes diarrhœa, enteritis, &c. It is also owing to the characteristics which we find in the second period that we meet with accumulations of liquids in the serous and abundant flowings in the mucous, &c. &c.

(I would here remark that, the observation of this law is of great importance in therapeutics. The medicines administered by the endermic method, can only be absorbed in the first period of the inflammation, and never in the second. Put *morphine, strychnine, &c.* upon a blister, the first day, the effect will be very *active*, very *little* the second day, and scarcely any the third. If you apply an ointment of arsenic to a chronic ulcer, the first day it will have a caustic effect, and the next day the phenomenon of intoxication. The first day, the caustic caused an inflammation, and the second day, this inflammation being in its first period, favored the absorption. It is undoubted that the endermic method may cause good results, but it is only on the condition of regarding these phenomena which we have indicated.) Finally, I would observe, that in certain cases, inflammation progresses so *rapidly*, that the first period passes almost imperceptibly, and the period of secretion appears to have existed alone, without being preceded by the period of dryness. These facts are sufficiently rare.

7th. *The contractibility of the tissues diminishes or ceases, sometimes completely.* Thus an inflamed muscle ceases to contract; the movement of the intestines is stopped; that of the heart lessened. If an inflammation attacks the uterus of a woman who has been delivered, the uterus will return but feebly to its place; in cystitis, the bladder reacts very little, and sometimes not at all, upon the liquid that it contains, and nevertheless the organs are found in the same state as when at the highest degree of their normal physiological functional power; the iris is tightened, the muscles are drawn back, the bladder is in a permanant state of contraction, the sphincters are violently convulsed, the diaphragm is seized with numerous and short motions. It is owing to this law that the moving organs, which, during inflammation, are heavier than in their normal state, are governed by the general law of weight; the inflamed stomach approaches the anterior and superior side of the abdomen, as during the elaboration of food; the uterus rises in the pelvis as during gestation; the testicle rises towards the inguinal canal as during emission.

8th. *Inflammation has the property of awakening certain sympathies between organs whose difference of structure, of position, and function, would seem to keep constant strangers to one another.* If we examine facts, we shall find these sympathies of three orders.

1. *The sympathies*, which I shall designate as *direct*, which do not aggravate the condition of the patient. This is a disease which joins

itself to another, but as soon as the sympathetic affection is developed, it progresses with the other; they exercise no influence over one another; such is the action of the skin in certain cases, on the digestive tube; one eye over another, &c. &c.

2. *Inverse sympathies*, which have the properties of diminishing the first inflammation or causing it to cease, and substituting themselves for it; such is the action of erysipelas upon the mucous membrane of the pleura, and the lungs upon the skin; of gastritis upon the meninges.

3. *Constant sympathies*, which are true complications of the disease, and which aggravate the patient's complaint considerably. This class of sympathies have this remarkable property of always affecting the same organs in the same diseases, so that the physician may foresee their approach. It is thus that meningitis determines gastritis; that we see orchitis appear during parotitis; catarrhal affections during the measles; gastric affections during smallpox; bilious affections during scarlatina; diseases of the urinary passages during nephritis, &c. It often happens that these constant sympathies are more intense than the original disease; and these affections which accompany them hide the real disease completely; which may deceive the physician.

9th. *It is incontestable, that during the course of inflammation, and above all during the first period, a much greater quantity of electricity is developed in the inflamed organ.* It is to this, undoubtedly, that we may attribute that itching—that species of irritation which precedes the development of erysipelas. Schönlein also attributes to it the production of that serosity which is diffused in the tissues, and that which forms sudaminæ.

Experience has not yet determined whether this electricity is positive or negative; perhaps (and I am tempted to think so,) it is both, according to the case, and perhaps also, this variation of electricity may produce some modification in the nature of the inflammation. (This is to be examined.)

10th. *Inflammation developes in the organs a generating power (vis germina,) which is sometimes enormous.* It is to this power that the augmentation in the size of the vessels is owing; the formation of new vessels; the secretion, the deposition and organization in the organs of pseudo-membranous tissues; the development of new products; the reproductive healing in the loss of substances, &c. It is this power that surgery employs, and without which, it would be impossible to obtain the cicatrizing of any wound. Such are the *physiological phenomena of inflammation.*

Reflections.

In all inflammations we find phenomena of the *nerves* and phenomena of the *blood*, that is to say, phenomena which belong to the two systems in which are found placed organic nutrition and the maintenance of the integrity of the physiological functions. If we examine these facts impartially, we shall see, that when these two systems are simultaneously excited, with a predominance of the element of blood, we find a much greater vegetability in the affected organ, at endency for new productions. When the sanguineous sys-

tem is alone remarkably excited, and the nervous system remains very nearly in the limits of its nervous excitement, the strength of the inflammation acts without causing any accidental production. When the two systems are simultaneously excited, with a predominance of the nervous element, we meet with bad erysipelatous and rheumatic affections. Also, if there is an excitation in the sanguineous element, with a depression of the nervous element, we meet with typhoid, putrid, puerperal affections, &c. &c.

ART. III.—*On Milk Fever, and Abscess of the Mamma.* By J. H. SHEARMAN, M.D. (Continued from page 174.)

I HAVE already considered some of the causes of milk fever. I will now proceed to note some further causes of it and to offer such suggestions as my own experience of the disorder and knowledge of its remedial treatment may enable me.

The great exciting cause of all fever, is, what is commonly but forcibly called "catching cold." The philosophical phrase of course would be, "abstraction of caloric." The instincts of our animal nature and the experience of our senses are unerring indications and sources of knowledge. No one was ever left so ignorant, by the condition of his nature, as not to know that want of proper food and requisite warmth were inevitable causes of fever.

However, a man may be so highly civilized and educated as to pass by such common-place knowledge, and look for information, as the philosopher looked for his spectacles, everywhere except just before his eyes. A chill will, in a majority of cases, be found to be the immediate cause of fever. It is the most common cause of milk fever.

When a room is over-heated, the body over-covered, and the skin has little circulation of blood, from lack of contact with air, and application of water, chilliness is as common as, nay more common than, when the body is exposed to cold and damp. A delicate woman would bear, without injury, entire exposure of the body to frost and snow, for the same length of time, as would suffice to give her cold and fever merely by the door being left open, when in the unnatural condition above described.

Supposing, then, that a woman in the condition of lactating, be chilled, and fever set in, what should be done? As she has been disordered by losing the heat of her body, she can be restored to order only by giving back that which has been taken away.

In any manner and in every manner in which she can receive heat agreeably, she ought to have it, but her own sensations should be the guide of our judgments. If she can comfortably take warm drinks, let her, and if agreeable to her taste and inclination, let warm spicy substances be added to them. One question of importance inevitably forces its way here. Ought alcohol in any way to be administered? The decision which I invariably give, is this: If the patient be so habituated to the use of alcohol as to be incapable of enjoying life without it, let her have some kind of alcoholic drink;

if she be not in such a melancholy and miserable condition, keep alcoholic drinks from her, as we would any other poison.

A warm room, with fresh, clean, dry *cotton* under-clothing, and a sufficiency of comfortable over-covering, not heavy, so as to admit of air about the skin and vapor to pass off, will in general be sufficient to restore the heat which has been abstracted. I mark the word *cotton*, for what appears to me to be good reasons. *Cotton* garments are worn as loosely as *linen* ones. If *woollen* garments were worn as loosely, I should have no objection to them: but as long as they are worn tightly fitting the body, they exclude the air from the skin and keep in the perspiration, and thus are one of the great causes of chilliness, fever and rheumatism.

If the skin from want of cleanliness and the action of the air, be in a state of clamminess and imperfect circulation; nothing will tend to restore warmth and health so soon, as washing the whole body with moderately cold water and soap, in a warm room. I have often found this preferable to a warm bath. The bath very commonly diminishes respiration—the only source of animal heat; the washing invariably increases it.

If I must say anything about "materia medica," I would simply give a cup or two of black or ginger tea, comfortably sweetened, or if I must have something out of a drug store, a few pills or a bolus of camphor and capsicum. If the chill be of long duration, a foot-bath, while sitting enveloped in a blanket, will be of great use.

Suppose that we are successful in restoring the temperature of the body, the whole of our work as physicians is accomplished. If we fail, rigors, shivering, head-ache, back-ache, and nausea occur, and preternatural heat and thirst follow. What shall we do now? The blood is in a disordered state, the elements are neither in their proper quantity nor quality. Carbon and hydrogen are consumed by the respiration of the lungs, faster than the oxygen, nitrogen, sulphur, phosphorus, and alkalies, are used by the excretory organs. Hence there is an inequality as well as unfitness of the constituents of the blood.

Shall we augment this inequality and unfitness of the blood, by adding to it, mercury, antimony, nitre, ammonia, ipecacuanha, and so on? or shall we consult nature, by attending to the sensations and appetites of the patient? If we do the latter, we shall be asked for cold water, some acidulous vegetable, and cool air. What harm is there in these things? Sponging the body with cold water will be agreeable—who can give a reason against it? Will not roast apples, oranges, and currant jelly, be as serviceable to the stomach and intestines, as castor oil or Epsom salts? Will not lemonade do as well as acetate of ammonia? Oh for the days when a physician need not be a nuisance, in order to get his living! Do not some of us long for a medical Utopia?

If it be contended that unless we give some medicine, we shall be thought ignorant or inattentive, I reply, take down your sign and throw your capital, body and soul, into some well paying charlatan establishment—Brandreth's or Townsend's—or even put your trust in the Graeffenberg Company. If you donot like to endure

the penalties of a philosopher, try to enjoy the plunder of a quack.

Treat your patient naturally, rationally, and you may hope to have her restored in three or four days, and secure her gratitude, and perchance the payment of your account. Bleed her, physic her, mercurialize her, and treat her unnaturally, and you may make a three week's case for yourself, and secure her dread of all doctors and physic, and find her both unable and unwilling to pay you, but ready enough to curse you and all other of her afflictions.

Let us now consider the condition and treatment of the breasts. Of course they are enlarged and hot during the fever. What is to be done? Let them have plenty of air; for the greater the circulation of the air around them, the faster will the excess of heat be removed, and the sooner will they be likely to be restored to the condition of health. They should be perfectly loose—free from the slightest pressure which might interrupt the circulation. The bandages which are inflicted upon women in their parturient condition, very frequently cause great mischief to the breasts, by preventing the free circulation of the blood. This, of itself, has, in more than one instance, to my knowledge, caused tumefaction of the breasts, and fever. A nurse, an old woman of any description, female or male, will not perceive this, because she—*it* I should say—has been brought up to believe that bandaging tightly is requisite to the health, and what with some is of more consequence, the shape of the lying-in woman.

With such, all reasoning is vain. We are not to expect such persons to reason; it is for the medical philosopher to do that. Let us use a familiar illustration. Tie a ligature round one of your fingers, and you will soon feel the effects of it, in the swelling, heat and pain of that part of the finger which is beyond the ligature. The same effect, in a modified degree, is produced by the abdominal bandage in the breasts. If no more of mischief, than the interruption of the epidermal circulation, is produced, that is enough to cause fever and swelled breasts.

Another illustration will assist us still more. A tight boot or shoe, causes sighing, faintness, qualmishness, head-ache, bitterness of the taste, and fever, before the pain of the foot makes us pay attention to the cause of our ailments. This, I unhappily know too well—not because I am fond of tight boots or shoes, but simply because I have been foolish enough in my time to believe the interested judgment of the bootmaker, instead of trusting to my own sensations and instincts.

Happily for me, at last I have come to the conclusion, never to believe any one, contrary to the impressions of my senses—neither bootmakers, tailors, doctors, philosophers, nor theologians. If I am cold, I believe in warming myself, in spite of all the world. If I am hot, I believe in cooling myself until I am comfortable. If I am hungry and have some special direction of my appetite, I satisfy it with the required food, if I can get it. If I suffer pain, and find out the cause, I endeavor to remove it; and when I am queer and feverish, I trace it to something which I have done or omitted to do,

and put that something right, before I expect to be any better. So I philosophize with myself—so do I philosophize with my patients; and give them the same advantages which I obtain for myself.

Supposing the breasts are tumid and painful, and threaten to obstruct the flow of the milk, and cause abscess; we must proceed in exactly the same manner as we would in a case of approaching inflammation of the mamma; cool the part down as quickly as possible, and if iced water and ice can be obtained, that is the most effectual.

A young married woman who had been confined in the country with her relatives, returned to town, with her breasts tumid and painful, and sent for me. She had had no sleep for two nights, and feeling nearly distracted, hoped I could do something to relieve her instantly. I applied ice to her breasts, and she experienced immediate relief. In about two hours, she fell asleep; the fever subsided; she could bear the breasts to be handled, and the milk drawn, and she had a speedy recovery.

It is true, that although every thing went well with her, it was not so with me. A married woman, who acted as nurse, was terribly outraged at my using ice, when she had been using fomentations and poultices. She predicted the murder of the patient; but it did not happen under my administration.

In another case, that of a colored woman whom I attended, who thought that she would tumble asunder if she was not bandaged up tight to her very breasts, they became frightfully tumid, and threatened abscess and fever. In an hour or two, the whole of the tumefaction subsided by the application of ice, and the milk ran again nicely.

Here, I had more of ignorance to contend with than in the former case. Another physician was called in, as soon as the symptoms were subsiding, and he happened to come—so it seems—just in time to save the valuable woman's life. She had lost the use of her limbs, from applying the ice—so she informed me, as she sat rocking herself in her chair, throwing her arms and legs about most violently—and should have been dead, but for something which the doctor gave her.

I was thinking whether she had not better have lost the use of her tongue, than employ it so ungratefully and falsely, when I was roused from my philosophic revery, by being informed that the other doctor, actually held up his hands, on hearing of my applying ice to the breasts. There was no reply left for me, but that of unconsciously holding up my own hands, in distressful consideration of the "learned ignorance" of my profession, and I ended the discussion of the question, by retiring to write my article.

The learned and ingenious Dr. Edward Johnson, of London, gives a very interesting detail of the case of his own wife, whose breasts were so inflamed and hard, that no milk had escaped them for two days: but on the application of snow to them, in less than two hours, spirted out their milk freely, to her perfect relief.

I have been in the habit of applying ice for such cases for many years, ever since my own life and that of my child were saved by

the use of ice in inflammation of the brain. I employ ice in these cases, on the same principle that I employ it in phymosis and certain cases of hernia, to reduce the volume and diminish the sensibility of the parts.

The quantity of heat in a substance determines its volume. If the substance of the breast be very turgid it will press upon the ducts of the lacteal glands, and prevent them from opening and pouring out their milk. Reduce the heat, the substance will be diminished and the pressure removed.

If the temperature of the body be low, the sensibility will be very little. As we increase the temperature, the sensibility increases, up to the point of torture and destruction. When the breast is tumefied, its sensibility is much increased; and the application of ice is always attended with relief. As soon as the distressing symptoms subside, the ice should be removed.

It is scarcely requisite for me to say much respecting the drawing of the breasts. As long as the formation and secretion of milk go on, it ought to be drawn off by the child or by some substitute for it, as often as the feeling of uneasiness occurs. In this respect, the breasts should be treated like the bladder. The next best substitute for the child to draw the breasts, is a grown person. Then, in the absence of both these, we may resort to breast pumps. In these, the principle of construction, ought to be that of the mouth of the child. The pressure, as nearly as possible round the nipple; the power, merely that of forming a vacuum, in order that the milk may be compelled to flow. Let but the principle be kept up, and the instrument may be made, "after what flourish your nature will."

Now, supposing that we are called in too late to prevent suppuration—what shall be our course? There is a very important point for us to consider. Suppuration has commenced, and we cannot hinder it; but is it a good or an evil? If it be a good, the more of it the better. If it be an evil, the less of it the better. What caused this suppuration? The disorganization of the vessels and tissues, through which the blood had to pass, but was no longer able; so it oozed and drained through and underwent decomposition.

This disorganization was produced by the obstructed state of the circulation, from pressure on the vessels; and an abnormal condition of the blood. These two conditions, were caused by the breasts being kept too hot, and shut out from the benign operation of the air; and from improper food and wrong treatment of the whole body. Shall we continue the treatment which gave rise to the original condition, that brought on the final destruction?

Again we appeal to the sensations and appetites. If warmth be most agreeable to the parts, let them be kept comfortably warm. If coolness be sought for by the feelings, let the breasts be cooled, even with ice if it be requisite. As long as heat is wanted by the sensations, the destructive process is advancing, and the living parts have not heat enough to sustain life well. As long as cold is wanted, there is an excess of heat educed by the inflamed condition—which is injurious to the living parts, and the sooner it is ab-

stracted the better. Our sensations, are the indicators of our natural organic thermometer.

I must philosophize a little more on this point. Organic life in animals, depends upon two processes; the constant deposition of new particles, whose caloric of composition is used in maintaining warmth, feeling and motion, and the constant removal of old particles, whose caloric of composition is expended, and therefore they are dead.

The process of deposition, or life, necessarily requires the blood which is to be deposited to be of a higher temperature than the solids with which it is deposited. If the temperature of the solids is too high, deposition cannot take place, and consequently life is at once suspended. Here cold applications are requisite. If the temperature of the solids is too low, contractility and mobility are lost, and circulation and distribution of blood and heat cannot be continued, and therefore life is suspended. Here, heat is required.

The sensations, are the indicators of both states. Our practice may be confidently regulated by the sensations. When cold is most agreeable, we may safely apply it, being assured that life is suspended from the solids being too hot. When warmth is most agreeable, we may safely apply that, knowing that life is suspended from the solids being too cold.

There is but one other consideration in this stage of our attention. Shall we use any other application than heat or cold? As water is an ever-present requisite of our organization, we may employ it whenever it is agreeable, and leave it off when not wished for. But is it requisite to employ any other substances? Of course, nurses and old women, of both sexes and ages, have their infallible remedies, time-honored and case-proved. It matters not that they are different or contrary. When once we leave the path of observation and induction, there is no error nor grossness too palpable or disgusting for us to receive and sanction. From herb-poultices down to cow-dung; including in the sweepings of ignorance and superstition, every sort of oil, grease, poultice and plaster,—all and each are specifics. Not one of them but what, in some case, a cure was effected by its application,—that is, some one survived its operation. That is, verily, much in its favor. My own opinion—I hope I feel the importance of expressing it with modesty in the midst of such an august assemblage of advisers—is, that the less we do, the better. If we wish to keep the breasts warm, some dry cotton-wool, or soft flannel, will be the best application. We may, now and then, employ a fomentation of either mere hot water, or an infusion of hops, chamomiles or poppy-heads; and we may use a poultice. But, the efficiency of all these, is their heat. For producing cold, water or ice is all that is requisite. I am by no means unaware, that the suspicion of ignorance will attach to me for thus expressing myself. It is possible, however, that I might dilate upon the operation of the substances recommended and employed, in such a manner, as to show that it was not exactly ignorance, but rather an enlarged knowledge of their properties, that led me to my conclusions. However, I will merely state now, that the sole value of any of them consists in aug-

menting or diminishing the quantity of caloric in the part to which it is applied. As I regard the occurrence of an abscess any where as a misfortune, the less of the evil the better, say I. Whatever tends to diminish the size of the abscess and the quantity of the matter is most desirable. Be guided by the sensations. Whatever produces most comfort is most beneficial.

I am not intending to overlook the question of food. "What shall we eat? what shall we drink?" are questions of great importance. I never knew any persons laboring under fever wish for much food of any sort; but they have invariably some particular like or dislike. And I have always found this peculiarity dependent upon some physical requirement of the body. Some desire things salt; others, things saccharine; others, things acidulous. Provided the things desired be food, that is, be substance which is convertible into, and needed by, the substance of the body, there can be no harm in the use of them; and there may be much harm in their forbiddance. I write from large and careful inductions.

Some desire gruel; others cannot taste it. Some wish for tea; some long for broth; some seek for lemonade, soda-water, or rather carbonic-acidulated water; some will take fruits; some, meat; some, merely vegetables; some, only water; and some, nothing. I accommodate them all. Of liquor, I have already spoken, and have nothing more to say. If any one is disposed to reply, "why, you merely follow nature!" I rise from my seat, make a low bow,—almost an eastern salaam,—and say, "Sir, you do me too much honor; you place me with the true philosophers and physicians of all ages and countries, from—ay, and before—the time of Hippocrates, down through the noble ranks of Galens, Celsuses, Boerhaaves, Bacons, Sydenhams, Shakspeares, Radcliffes, and Metcalfes."

If any one ask, what Shakspeare is quoted for as a medical or philosophical authority, I reply, that it is easier to construct a true medicinal practice from his works, than from those of any other man. He is the greatest natural physiologist and pathologist that the world ever produced. The man that can read Macbeth and Hamlet, and not discover this, has no tact nor taste for the sciences of physiology and pathology.

If I am asked who Metcalfe is, I reply, get a copy of his "Caloric," and read it; that will tell you. If the work be scarce, as there is only an English edition of it,—I refer you to two reviews of it, in former numbers of this Journal. I will just add, that, guided by the philosophy of Shakspeare, he has threaded his way through the mazes of every obscurity in physical philosophy, and arrived at the hidden temple of truth. Any one who reads and comprehends his work, is in possession of the key of nature.

There remains still for our consideration, the treatment of the abscess, and the healing of the wound. The great secret of healing an abscess, is, meddle with it as little as possible. Cleanliness, rest, and comfort, are worth more than any ointment or application in the world. A nice, soft, clean sponge, adapted to the shape of the wound, is the very best poultice. Lint, cotton-wool, and oil skin, or silk, are next.

If poultices must be had, they ought to be soft, warm and light, and changed frequently. All grease is injurious; and all mineral applications so much poison. If you wish to destroy a fungous part, do so with nitrate of silver. But do not imagine that wounds are healed by poisons. There is but one thing which heals a wound—*good blood.* You cannot make it; mind that you do not mar it. The stomach, intestines, and lungs, are the laboratories where blood is made—not the doctor's shop. Meat, gravies, vegetables, fruits, and water, are the materials for making it—not drugs. Obey the injunction of Diogenes:—don't hinder the sunshine; stand out of the way, and let nature alone to do her work. It is really marvellous, how little we know; yet how much we do. In proportion as we know more, we shall do less—at all events, less mischief.

Why do so many accidents happen to steam-engines? The men who undertake to direct them, have not enough of philosophy and good sense for their business. The reason why there are so many bodies out of order, is, that those who have the management of them are so incompetent to the task. If it be felt and said, that I assume to myself the dictatorship of medical philosophy, I answer, so does every one who writes upon a medical subject.

If I were permitted to write my own medical history, I should have a hundred blunders to put down, for one discovery of rectitude. And the most painful part of my experience is, that my blunders always paid me better than my rectitudes. I have been well cursed and defrauded for every discovery and delightful cure which I have achieved "*novo modo;*"—while I have been handsomely paid and thanked, for helping, with some of my learned brethren, to medicate to the grave "*secundem artem*" some who have put their trust in our philosophic errors. The great difference between myself and others, I presume, is, that I am willing to admit my blunders and failures, while they may be indisposed to do so. None but the man who feels that he is right, can afford to say, "I was wrong.''

ART. IV.—*On Inflammation: its Proximate Cause and Methodus Medendi.* By J. P. BATCHELDER, M. D. (Continued from page 168.)

OF THE PROXIMATE CAUSE OF INFLAMMATION.

BY the proximate cause we mean: "That phenomenon in the body or part, most immediately preceding the state which we call disease; and without which previous phenomenon the disease is not known to exist." * Two theories relating to the proximate cause of inflammation have been promulgated, which are diametrically opposed to each other. On the one hand, it has been urged that increased action is the proximate cause: on the other, diminished action; and in the maintenance and vindication of both there has been no lack of zeal, ability or ingenuity, on either side.

In reference to the first we respectfully ask: Does increased ac-

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* The above is Parry's definition of the proximate cause,—the best extant.

tion constitute "that phenomenon which immediately precedes the state which we call disease, and without which previous phenomenon, the disease (inflammation,) is not known to exist?"

If the exciting cause induce contraction of the minute vessels, the only mode of increased action of which they are capable, the fluids they contain will be forced out, and they, (the minute vessels,) will in consequence be reduced to a state of comparative depletion; a condition utterly incompatible with the existence of inflammation, which requires as the very essence—the *sine qua non* of the disease, an absolute distention, or over-distention of the capillaries. Believing, however, that the very best method of getting rid of a false theory, is to establish one that is true, and particularly as we wish to avoid even the semblance of aggression, we shall push this point no farther; but turn our attention to the opposite theory.

It is admitted by all that there is more blood in a part when inflamed than in a state of health: and it is also affirmed by microscopical observers that that fluid moves through the vessels of the part affected with greater rapidity than when the circulation is normal; but these facts, if indeed the latter be a fact, have no relation whatever to the proximate cause which relates solely to the manner in which the increased quantity of blood gets into the vessels. An agent, acting mechanically, chemically, or physically upon any part of the system, which makes an impression exterior to the vessels stronger than that made by the fluids within, will in obedience to the law that the stronger effaces the weaker impression, induce them to forego their resistance; and yielding, allow themselves to be distended, or over-distended until they resist painfully. We have then distention of vessels, the primary symptom; redness, the second; and pain, from resistance, the third; the trio, which constitutes the formal and technical existence of the disease—the assemblage by which it is recognised. Now what but diminished action could have preceded this "state which we call disease?" Had the action of the capillaries been increased, no such result could have followed, even by possibility: neither could it have occurred if those vessels had not relaxed, yielded and suffered themselves to be distended or over-distended. We infer then that the proximate cause of inflammation is a suspension of the normal resistance; a relaxation; a yielding; a diminished action of the capillaries of the part that admits, upon hydraulic principles, of the inflowing of fluids by which they (the capillaries,) are over-distended. This want of action, this non-resistance, continues until the distention has proceeded so far as to excite actual resistance in the capillaries, and then, and not till then, can we affirm the existence of the disease. The action of the vessels is then increased. This increased action, the final end and natural consequence of which is, not only to prevent the additional influx of fluids, but to force them out of the inflamed part, constitutes the true *vis medicatrix naturæ*; for it causes, or attempts to cause, and if successful does cause, the reflux of fluids into the general circulation, which is equivalent to an evacuation by art. In both instances the vessels are depleted. This result, (the depletion of the vessels,) we deem, as before stated, the only legiti-

mate termination of inflammation—whether brought about by the efforts of nature, by remedies, or the conjoined operation of both.

It has been asserted, that there is not only more blood in an inflamed part, but that it moves through it more rapidly than in health, and that there is, therefore an increased action. Neither of these facts concerns the proximate cause; the stage of the disease having gone by for that. Relating wholly to the proximate effect, they confirm our doctrine.

The exciting causes of inflammation, as we have shown in a former paper, diminish resistance in the capillaries—venous as well as arterial;—consequently, as much, and even more blood will be admitted into them, and transmitted through the inflamed part than in health. But this condition of things cannot last long; because the fluids, changed in their chemical and physical properties, will be forced in every direction upon vessels which have not been subjected to the exciting causes, and therefore do not participate in the morbid actions of the part. Those vessels, thus acted on mechanically, by fluids chemically and physically altered, promptly set up a resistance to the *vis medicatrix naturæ*, the exertion of which is to force the fluids out of the vessels of the inflamed part; a result which may be, and most generally is, prevented by the aforementioned resistance of the surrounding vessels. A pause now ensues; the fluids stagnate in the centre, around which, and towards the circumference, the vessels being distended to a degree which constitutes congestion, relieve themselves by the effusion of fibrine, with which the blood abounds during the phlogistic state. This fibrine, the effusion of which has depleted the vessels, becomes organized, and furnishes a barrier to the further extension of the mischief. Beyond said barrier, serum is poured out in such quantities as to occasion the œdema that often accompanies inflammation, and evinces diminished intensity wherever it exists.* For the foregoing reasons we have come to the conclusion that decreased action is the proximate cause of inflammation.

Indications and Method of Cure.

It is undoubtedly the duty of the practitioner to endeavor at all times to prevent disease; but as this paper has respect to cure rather than prevention, we shall omit to notice the indications which relate solely to the latter, except to remark, that those which pertain to prevention look directly to the proximate cause;—the reason is obvious, for without "that phenomenon, the disease is not known to exist;"—and indirectly to the remote and exciting causes, they being essential to the production of "that phenomenon," the causa proxima.

As medical men, we must not, however, lose sight of the fact, that the remote and exciting causes, when present, tend to keep up the

* This œdema is very apt to take place as above described, in inflammations of the larynx, and particularly about the glottis, and constitutes the principal cause of danger in many of those cases, especially if conjoined with spasm of the muscles belonging or appertaining to those parts. We shall consider this effusion of serum in connection with another part of our subject.

disease, and therefore have in such cases a strict relevancy to the cure. The first indication, then, is to remove them. But as they are often absent, and the disease apt to go on after their removal, we do not regard that matter as coming fully within the scope of this paper, and consequently, omit its farther consideration.

Having endeavored to explain the manner in which this over-distended state of the vessels, the proximate effect is produced, we shall now consider—1. How it is kept up. 2. The method and means by which it is removed.

1. How is this over-distended state of the vessels—the disease, (the immediate effect of the proximate cause) kept up?

The action of the heart, (whether increased or not,) with the elasticity of the larger arteries, constitutes the *vis a tergo*—the power behind—which continually and unceasingly forces the blood along into the capillary vessels of the inflamed part; and so maintains and keeps up their over-distended condition. But why does not the blood pass through and out of them as fast as it enters? Having briefly referred to this point in connection with the *vis medicatrix naturæ*, we shall proceed to consider it more particularly in relation to one of the indications of cure.

It has been shown, that if a hollow viscus having an outlet, or capillary having a pore, be suddenly distended, or from any cause whatever made to act inordinately, the sphincter or pore, resisting as suddenly and violently, would hold fast and prevent the transmission and egress of the distending fluid; thus in consequence of the *vis a tergo*, constituted as described, on the one hand, and the resistance of the pores on the other, the over-distended state of the vessels, which comprises the very essence of the disease, is kept up in all its intensity. The conflict is then between the heart, the capillary vessel, and the pore; or, more particularly, between the first and the last. And the practitioner who has most skill in adapting remedies to the adjustment of these opposing agents and actions, will oftenest succeed in curing inflammation.

To comprehend this matter *in extenso*, it should be remembered, that the capillaries and pores on the inner and outer surfaces, as the skin and mucous membranes, and internal organs, as the liver and kidneys, are in a state of distention and resistance, hence the dry skin, parched tongue, constipated bowels, paucity of urine and bile, which go to make up the *tout ensemble* of the symptomatic fever of inflammation; or the phlogistic diathesis. Now, the mere softening of the skin, or the appearance of moisture on the tongue, its tip or edges for example, indicates the yielding of the pores in those parts, and foretokens a general relaxation. They are, indeed, the harbingers of the diarrhœa, copious sweats, and flow of urine, secretion of bile, &c., which constitute the crisis, so much reckoned on by the older physicians. Although the quiescence, or abatement of the heart's action precedes and contributes to the relaxation, effusion, &c., it should not be forgotten, that the perspiration when general, in its turn, like blood-letting, relieves the heart, and is therefore the precursor of permanent amendment in inflammation as well as in most fevers. The same may be said of the other evacuations.

In the normal condition, and under healthy action, the pore or sphincter, first in the order of events, relaxes; but in inflammation, for wise purposes, this order of events is reversed. If the pores yield while the *vis a tergo* continues, the effusion of fluids from the several kinds of vessels involved, will be so copious as to destroy either the structure or function of the part or exhaust the patient;—therefore, they (the pores) must not yield. Shall the vessels forego their resistance? if so, they will be more and more distended by the action of the heart, until they lose their vitality, and gangrene will be the result; therefore, they must not relax.

As our leading indication of cure flows from this doctrine, as a natural, regular, and legitimate deduction, and the success of our treatment depends mainly on the principles it involves, we hope to be excused for attempting to exhibit it free from obscurity, or risk of misapprehension.

Referring then to the urinary bladder, as furnishing the most familiar and favorable example for illustration, we say we can recollect no instance of retention of urine in which the sphincter yielded and permitted that fluid to pass incontinently before that viscus had become fatigued (paralyzed as the common phrase is,) and ceased from, or remitted in some good degree its inordinate expulsatory efforts, thus affording a most happy elucidation of a law, certainly very general, perhaps universal: that the sphincter or pore does not yield prior to the abatement of the *vis a tergo*, or in other words, until the equilibrium between the action of the viscus and its sphincter, or the capillary and its pore is restored. The reasons for this are indeed quite obvious. Soon as this equilibrium is established, the sphincter relaxes and allows the urine, as in the example adduced, to escape through the urethra as fast as it enters the bladder by the ureters.*

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* What are the practical deductions from this doctrine in relation to the medical treatment of retention of urine, one of the most distressing "ills flesh is heir to?"—also in respect to other affections of the bladder and urethra? They are, 1. Induce the patient to refrain as much as possible from all straining, or efforts of an expulsatory character. 2. Bleed to fainting (if warranted by the circumstances of the case,) which suspends for a time the action of the bladder, and the resistance of the sphincter, and both may and often do participate in the spontaneous relaxation which takes place in the capillaries over the whole system when the patient recovers from the syncope induced by the bleeding. 3. Give a full dose of opium which lessens the sensibility of the bladder and its sphincter, and likewise the action of both. In retention there is not a more efficient remedy than opium, in a liberal dose, from two to four or five grains, according to the severity of the symptoms or urgency of the case. The warm or hot bath is often an excellent adjuvant, and in connection with the other measures prepares the way for the surgical treatment—the introduction of the catheter, with which it will be well to commence, in most cases, unless contra-indicated. In the early part of the disorder simple exposure of the naked body to the air, or dashing cold water on it by the pailful, (causing capillary contraction) disturbs the morbid relation which obtains between the bladder and its sphincter and causes the urine to flow. A similar course, so far as voluntary effort is concerned, may be pursued, with propriety, in the treatment of most diseases of the bladder and urethra, attended with difficult micturition, which are always made worse by the straining of the patient, from which he should be instructed to abstain as much as practicable and trust solely to the powers of nature, spontaneously and uncontrollably exerted. Moreover it should be recollected that derangement of function gene-

So when the capillaries are over-distended and act inordinately the pores do not relax before the action of the heart has somewhat abated; and this is as it should be, for if they relaxed, prior to the

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rally precedes organic disease; and particularly in these organs, that form of malady is often brought on by the injudicious exertions of the individual, which more and more disturb the function and of course increase the affection; which in turn disorders more and more the function and excites to more strenuous exertions. It is, therefore, the duty of the practitioner, especially in the incipiency, and indeed through the whole course of these complaints, to caution and advise the patient on these points, and he will have the satisfaction of finding, that if no cure is effected, the progress of the disease will be retarded. This doctrine has a no less strict and practical bearing on the functional disorders of other hollow viscera, having sphincter ed outlets, as the uterus, rectum and stomach. In obstetric practice it is of no ordinary importance. The uterine contractions have for their object, 1. To open the mouth of the womb. 2. Expel its contents. Now the os tincæ holds the same relation to the uterus as sphincters do to other organs with outlets; the law or principle of action is the same in all, which is, if the organs act gently or normally the sphincters relax; but if suddenly or inordinately, they hold fast, or contract the more energetically; and this is just as it should be, for great inconvenience and misery must follow, if the sphincters yielded on every occasion, when the organs with which they are connected contracted suddenly or violently. If then the uterus should act irregularly or too forcibly, the os tincæ would, as in duty bound, like other sphincters, not relax or suffer itself to be dilated; but resist the more strongly in proportion to the inordinate action of the womb, and of course retard or prevent the expulsion of its contents.

The abnormal action of that organ arises from two causes, viz.: the voluntary efforts of the woman, and too great determination of blood to its substance. 1. The cause which most frequently disturbs the equilibrium between the action of the womb and its sphincter is the voluntary bearing down of the patient herself. Parturition is mainly a function of organic life, and the power by which it is performed is of course one of its attributes. Now then, the voluntary power which belongs to animal life, should be neither invoked, nor allowed to be exerted when it can be prevented, which it can be to a considerable extent if the patient be docile and is instructed and urged to refrain from its exercise, a thing she will endeavor to do of her own accord, after having realized the benefit during a few pains. The primary object of uterine contraction is to open the os uteri preparatory to the extrusion of the contents, and so long as this process of dilatation is going on, or until it is completed, all voluntary efforts are prohibited by the nature of the case; they are not called for, do no good but much evil, for they aggravate suffering and retard labor by forcing the contents of the womb violently against the sphincter, which causes it the more pertinaceously to resist.

When the os is fully dilated, it may be supposed that moulding and adapting the presenting part, and its transit through the passage would be hastened if the pains were increased by the voluntary bearing down efforts of the mother; but it must not be forgotten that the process still belongs to organic life; and that therefore, all such efforts should be withheld, and Dame Nature, who is never thwarted with impunity, be allowed to have her own way, and the female attendants, ever ready to interfere on such occasions, with their advice, at least, made to stand by in silence, and let her dameship have fair play. When the presenting portion comes to press on and distend the external parts, the process assumes a mixed character; the parts to be dilated belong to animal life, but nature, true to her principles and purposes, has ordained that the power, by which the distention of these parts as well as the expulsion of the child is to be effected, remain still an attribute of organic life; therefore the volitions of the patient must be excluded as worse than useless.* The policy and practice inculcated should be pursued to the end of labor. By so doing the suffering

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* If encouraged or allowed to make much voluntary exertion, she may become too much debilitated or exhausted to complete the labor, hence the demand for instruments, for which there will be very little need if the course recommended be followed.

abatement of the action of the heart, there would be nothing to oppose or prevent the effusion of fluids in such quantities as would, in every instance, derange or destroy the function or structure of the part or organ in which the disease was located. When the *vis a tergo* continues, and the pores persist in their resistance, the capillaries may resist until they lose their vitality, and we shall have what is technically called gangrene; but this never happens, as the result of inflammation, without the concurrence of the two contingencies just mentioned. If the pores yield there may be disorganization,

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is greatly mitigated and the danger of laceration dwindles to a point. Having practised according to this system during the principal part of his professional life, the writer has known a great number of women pass through even first labors with comparatively little suffering. Some have declared, in one hour after delivery, that they felt well, as if nothing had happened, and indeed, the whole getting up has been of a piece equally favorable and satisfactory. The principal difficulty has often been to keep them quiet, and exercise the degree of caution deemed necessary to secure them from the inconveniences and perils which so naturally cluster around the puerperal woman. This will be readily comprehended when it is considered that voluntary efforts alone produce fatigue; hence the fatigue, debility and exhaustion, from the effects of labor, are to be chiefly traced to the strenuous exertions put forth by the patient. Women, in the savage state, practising upon this principle, bring forth with little suffering or inconvenience, and not unfrequently has the writer witnessed the same thing in civilized life, even in primiparous cases. The women, I know in one and doubt not in both instances, refrained from voluntary exertion, and so far as child-bearing was concerned were on a level. The chloroform, by merely suspending volition, performs all that is really required of it as an anæsthetic agent in obstetric practice. After all, it is the fiat of the Almighty that women "in sorrow shall bring forth children," but the malediction neither demands that she should suffer beyond what is necessary, as a punishment for having disobediently followed the bent of her own inclination, nor prohibits attempts to mitigate her sorrows.

2. Too great determination of blood to the organ, and abnormal quantity of that fluid in the capillaries of the uterus, stimulates them to contract, and they do contract violently in order to force it out. Now, what all the vessels of an organ do, that will the organ itself as a whole do; hence, the violent action of the womb under such circumstances, and the simultaneous or consecutive action of its sphincter, which resists dilatation, and of course prevents the expulsion of the uterine contents. This state of things may be suspected when there are strong pains with little effect, other than distressing the patient,—when the pulse is full, frequent, or perhaps hard, with hot skin, thirst and restlessness; but it may be ascertained to a certainty by the *touch*. The os will then be found dry, tender, and unyielding,—often but little affected by the pains,—sometimes contracting instead of dilating during their existence, notwithstanding their violence.

When the equilibrium between the action of the uterus and its sphincter is disturbed from this cause, bleeding until the pulse falters, or fainting approaches, equalizes the circulation, removes the disturbing cause, restores the balance of power and action between the viscus and its outlet, and the labor progresses with all due expedition. Tartar emetic in nauseating doses, will sometimes do the same. We not very unfrequently find pregnant women near the time of confinement, complaining of what are termed "false pains," which are no other than the contractions of portions of the uterus whose capillaries contain an undue proportion of blood, that stimulates them to contract, while those in other portions having only their proper quantity, remain quiecent. These are distinguished from the true pains by producing no effect upon the os. They disturb and harass the patient, and sometimes the young and inexperienced accoucheur, who does not exactly know what to make of them, or what to do to remove them; but he may derive comfort from the assurance that a small bleeding or two, with some castor-oil, will equalize the circulation, and consequently remove the difficulty.

but not mortification; if the *vis a tergo* cease prematurely, the vessels may not be able to relieve themselves or even maintain their vitality, and gangrene be the result; but it cannot be said in the strict and legitimate sense of the terms that gangrene has been produced as the consequence of inflammation. To repeat, the conflict is between the *vis a tergo*, the capillaries, and their pores. In health, the last yield for the relief of the former; and the same order of function obtains in this disease; if moderate, the relaxation of the pores unloads the vessels and cures the inflammation.

2. The method and means by which this over-distention of the vessels is removed.

This branch of the inquiry embraces the indications of cure proper; to the consideration of which we now proceed.

From the foregoing principles and doctrines it may be inferred that relaxation of the sphincter or pore is the ultimate object to be aimed at by the practitioner; but to effect that with safety, the *vis a tergo* must be diminished; until that is done the sphincter or pore should not relax, and probably never would relax if the disease were intense: Hence the natural, regular and legitimate deduction, that to lessen the *vis a tergo* so as to restore the equilibrium between the vessels and the pores, is the first indication of cure. Now the *vis a tergo* cannot in every case, or indeed in a majority of cases be so far diminished as to secure this result without endangering the life of the patient; therefore a second indication is required, which is: to lessen the effect of the fluids impinging against the inner surfaces of the capillaries, which excites them to inordinate action and disturbs the harmony of function between the vessels and the pores.

If the foregoing were the only indications, it is obvious that even they could not invariably, or under all circumstances be fulfilled with safety; therefore, a third indication is demanded; which is: to diminish or take off the resistance of the pores. A fourth indication relates rather to the removal of consequences, than to the cure of the disease. For example: to remove from the part affected whatever has been effused or secreted by which the vessels have been emptied, and the inflammation cured; but which if allowed to remain might impair, interrupt or destroy the function or structure of the organ or part.

FIRST INDICATION OF CURE—THE DIMINUTION OF THE VIS A TERGO.

In health the *vis a tergo* is kept up by the normal action of the heart, aided by the elasticity of the arteries; and in inflammation it is rendered more intense by the increased action of that organ, induced by the augmented quantity of arterial blood admitted into its substance. If this increased action of the heart be produced and kept up by the augmented quantity and perhaps also, in some degree, by the vitiated quality of the blood thrown into its substance by the coronary arteries, reason and common sense alike dictate the propriety and necessity of lessening the quantity of that fluid.

The method, then, of fulfilling this indication is, 1. By the antiphlogistic regimen, which comprises perfect quietude of body and mind; pure air, abstinence, diet and proper temperature. When the phlogistic diathesis prevails, digestion is disturbed; chyme, badly formed; assimilation, imperfect: the fluids, changed and unhealthy, make a strange and novel impression on the inside of vessels and stimulate them to irregular and morbid actions: the withholding of food lessens the circulating mass; diminishes the power by which it is moved, and abates the morbid sensibilty which feels its impulsions; results, which extend to organic as well as animal life. For these reasons, nature and theory both suggest diet and regimen; and experience confirms the suggestion; the quantity and quality of the ingesta are therefore matters worthy of consideration.

2. By blood-letting; general and topical.

GENERAL BLOOD-LETTING.

If the quantity of blood be considerably and rapidly diminished by venesection, the vessels of all parts, diseased as well as others, feel the effect; that is, they contract *pari passu* with the abstraction of their contents: If syncope, which consists in an universal and extreme contraction of the capillaries, be induced, the fluids in the inflamed as in other parts will be forced out of them (the capillaries) into the larger vessels.*

Now this violent and universal contraction of the capillaries must be followed by a spontaneous relaxation, or the patient will certainly and quickly die.† This relaxation is usually manifested first in parts abounding with capillaries, as the face, upper part of the chest, and

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* The practitioner who has ever bled a patient, laboring under conjunctivitis, to fainting, must have observed that all the symptoms and phenomena of inflammation have disappeared, and that owing to the shrinking of the capillaries the diseased eye had indeed become as bloodless and white as the other.

† There is one case in which this contraction of the minute vessels is not followed by the spontaneous relaxation of which we have spoken, and that is when the principal artery in a limb has been tied, or the circulation through it wholly and suddenly obstructed; contraction of the minute vessels necessarily ensues; a sense of coldness is experienced and the temperature actually falls several degrees; the surface assumes the anserine appearance without the redness, and the hairs stand off more at right angles. In a few days the limb seems to resume its natural warmth and is generally supposed to become preternaturally warm; but this is apparent—not real; it is the effect of the additional clothing in which the limb is usually invested; when that is removed and the two limbs exposed to the air, the temperature of the one still falls considerably below that of the other.‡

The great practical deduction to be drawn from the fact that this species of contraction is not followed by spontaneous relaxation, is the propriety and necessity of additional clothing to prevent too great contraction which might be productive of speedy gangrene; and of withholding warm applications which might induce a relaxation and over-distention of vessels that could not be sustained and mortification would no less certainly follow.

‡ The verity of these observations I have recently had an opportunity of testing in a case in which the external iliac artery was skilfully and successfully tied by my friend and associate Dr. William H. Van Buren, of this city.

finally over the surface generally; hence we find the former portions and frequently the whole skin covered with perspiration before the capillaries of the brain and heart, acting in sympathy with those of the integuments, have relaxed. A wonderful provision of nature this! For exactly in proportion as the capillaries of the surface are filled, those of the internal organs will be relieved of a portion of their contents; so that this relaxation and consequent filling of the cutaneous capillaries really and truly answers for the time being, and permanently, if kept up as it should be, all the purposes of an abstraction of blood.

In order to make the most of this spontaneous relaxation, it should be borne in mind that it may be increased and prolonged much beyond what is natural by the administration of a full dose of opium, immediately on the recovery of the patient from the fainting caused by the bleeding. By depriving the vessels of a portion of their organic sensibility, the narcotic influence of the drug co-operating with the law of the system, carries this relaxation much beyond what is natural, and moreover holds the vessels in that state of dilatation some ten, twelve or sixteen hours, or until a considerable time after the specific effect of the medicine may be supposed to have ceased, during which the patient is easy, and comparatively free from disease. By this method or mode of practice an inflammation of a formidable character may be terminated at a blow; a dose of salts or castor oil completing the cure. If the symptoms return, the same process should be repeated; modified according to circumstances. Or if again; an occurrence which we have seldom witnessed, they must be met in a similar manner; or by such other means, as the judgment of the practitioner shall dictate, as the warm bath, &c. When the intensity of the disease has been considerably lessened and the powers of the system enfeebled, the pleasant impression made by the physical influence of heat and moisture will induce a degree of relaxation that will remove the pain which still afflicts the patient, and so prove a substitute for the lancet.

This relaxation is not confined to the vessels of the inflamed part; but extends to all the capillaries and especially to those on the surface; they being more particularly subjected to the aforementioned instrumentalities. Into them the blood will flow, and so long as it there remains, both the heart and the site of the disease are freed from its influence; a result equivalent to an evacuation. On this principle and under such circumstances, I am in the habit of resorting to the warm bath, as to venesection, so often as the pain returns, and therefore keep the tub nearly filled in the sick room that by the addition of a small quantity of boiling water the temperature can be raised to the requisite degree and the patient immersed; and on the removal of the pain, returned to bed; after which anodynes, or sudorifics, as the James' powder, with or without opium may be administered in order to hold what had been achieved by the bath. The foregoing practice may be pursued in croup, laryngitis, and other inflammatory affections complicated with spasm or irritability, by the skilful practitioner.

The number of inflammations of a purely unmixed character, or free from all complication with one or the other circumstances just

alluded to, are very few—fewer indeed, according to my observations, than is generally supposed. In a large proportion of cases in the great cities, all the symptoms are aggravated and the disease kept up, to the detriment and often danger of the patient, by a vitiated condition of the circulating fluids—a condition which requires that depletion and narcotics should be blended—the one for emptying the vessels*—the other for lessening their morbid sensibility, which prevents their feeling and responding to the impressions made, not only by the momentum of the circulating mass, but by its irritating qualities.†

Determination of blood to the head does not preclude this practice of giving opium according to the principles laid down, unless the substance of the encephalon, the nervous centre itself, is seriously involved; in which case it may be questionable, owing to the fact that the narcotic acts directly on the nervous system.‡

In many cases analogous to those in which the warm bath is so useful, a ligature applied to the thighs near the body, sufficiently tight to interrupt the return of the blood through the veins without at all interfering with its passage in the arteries, may be made to answer the purposes of an evacuant. When these ligatures can be no longer borne on account of the uneasiness and discomfort they occasion, they may be removed and applied to the arms near the axillæ. This use of the ligature will be recognized as being in perfect accordance with the principles laid down.‡

The safely and success of this practice, it will be seen, depend on the great and certain relaxation that takes place in the capillaries over the system, and which is, as long as it lasts, equivalent to evacuation. In order to secure that result, the narcotic must be given in a full dose. It is not required that we should always bleed to fainting. A small bleeding of from eight to twelve ounces will often answer the purpose, and that too in many cases in which the opiate, but

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* From observation, the writer is convinced that the lancet might be used with advantage much more frequently than it is, in the large towns.

† The practice of giving opium after bleeding, which has been just detailed, so far as the writer is concerned, sprang from a remark of Darwin, that a bleeding immediately preceding an opiate, increased its efficacy. The gentleman with whom he commenced the study of medicine being a great admirer of that author, adopted the suggestion, and often bled patients to whom he was about to administer an opiate. Having frequently witnessed the salutary results of the practice, he also adopted it; and from repeated trials discovered that the principle and practice were susceptible of a much more extensive application than was at first apprehended—that in fact opium might be given, not only with safety, but with the happiest effect in cases of inflammation, if bleeding were premised, in which, according to the theories then in vogue, it would have been utterly inadmissible. Encouraged by success, and emboldened by a tolerably-enlarged experience, he came at length to use it in the manner now recommended, and is unable to call to mind a single instance in which he has had reason to regret having done so.

‡ During the last season, I was called to a lady whose case bore the strongest marks of determination of blood to the head I had ever witnessed without positive ymptoms of grave cerebral disturbance. I was never in more doubt, whether or not to adopt the practice which has been recommended; but confidence in the principle prevailed. The lady was liberally bled; took a grain and a half or two grains of opium and six grains of the pulvis antimonialis, and was, literally speaking, well the next day; a profuse prespiration having followed.

for the bleeding, would have aggravated every symptom. Again, the vehement contraction of the capillaries throughout the system, during fainting and the subsequent relaxation, will have so adjusted the balance of circulation, even without the narcotic, that the vessels of the diseased part will be able to resist, for a time at least, the *vis a tergo*, and prevent the intromission of fluids in an abnormal quantity: hence the remission of symptoms which so generally succeed a decided bloodletting. But the capillaries of the heart, like those in other parts, may, and often do, sooner or later, relax and re-admit more blood, which causes its action to be renewed with so much energy that the vessels of the inflamed part, unable to resist the impelling force of the blood, yield to its impulse and are again over-distended; a condition indicated by the recurrence of pain and suffering, which calls for a repetition of the bleeding. Several bleedings may be, in fact, required before the equilibrium between the *vis a tergo*, the capillary and the pore is restored. When that has been accomplished a free and general perspiration usually breaks out.

When the case is left to nature, this result is brought about in another way. The heart, the capillaries, and the pores experience fatigue, and must have rest; to obtain which they forego action and resistance, and the balance of circulation is restored. The morbid phenomena disappear, and nature is said to have performed the cure. But why is she not always competent to do this? Because the heart with that "charity which begins at home," first supplies itself with arterial blood through its coronary arteries; the consequence of which is, that its own action is increased, by which more blood is thrown into its capillaries, and its increased action is thus kept up so long as the mass of blood remains undiminished, or until the capillaries (the antagonists of the heart), in every part of the body, have relaxed and become filled with blood; a state which so far as it goes, and so long as it lasts, is equivalent to an evacuation, because considerable time must elapse before the blood, thus distributed, can find its way back to the heart. That organ, thus acting, and re-acting upon itself, will continue its augmented efforts until either the capillaries of the diseased part have lost their tone or vitality; or, until exhausted by its own over-action, it has become too feeble to sustain the vital functions; hence, any sudden and considerable subsidency of the pulse in a case of inflammation, indicates either commencing gangrene, or approaching dissolution. For these reasons we conclude that nature is not competent to cure all cases of inflammation.

Venesection, as it is skilfully or unskilfully employed, is potent for good or for evil. It is therefore, important that definite rules should be laid down for determining—1. When it should be resorted to. 2. When the proper quantity of blood has been drawn. 3. When the operation should be repeated.

1. When is venesection to be employed?

In order to answer and settle this question, we must constantly keep in mind, that the specific object of blood-letting is to lessen the *vis a tergo* by diminishing the quantity of blood in active circulation. The fulness, hardness, and sometimes the frequency of the pulse, in

connection with other circumstances of the case, indicate the propriety and necessity of bleeding. Hardness and softness of bodies, are the qualities which enable them to resist impressions; and in feeling the pulse, they are measured by the degree of muscular contraction, which forces the finger against the artery, and the resistance opposed by the vessel to that contractile effort. The pulse should be examined in both wrists, for it is, now and then, occasionally soft in one and hard in the other; a condition which calls equally for the lancet, as if hardness prevailed in both. If there be perplexity and doubt, it may be well to feel the pulse in other arteries, as the carotids, &c. The pulse, however, is not always to be relied on; for there are cases in which neither its hardness, tenseness, nor fulness is very manifest, and yet bleeding may be proper, and even necessary. In such cases the heart must be appealed to and examined. If that organ beat strongly, it will be right and proper to bleed,* as suggested by Laennec,—a suggestion of great practical importance as furnishing a criterion for the safe and proper use of the lancet under very perplexing circumstances.

The condition of the diseased part may likewise assist us in deciding upon the propriety of venesection; for the exalted sensibility, and over-distended, stretched, and resisting state of the vessels of the part are declared and measured with tolerable accuracy by the feelings of the patient, pain on pressure, &c.† If the pain be severe, abstraction of blood is required for relief; but there are cases in which neither the pulse, nor the state of the part, nor the feelings of the patient, actually demand the lancet; yet, a small bleeding will nevertheless prepare the system for other remedies; especially the antimonial powder and opium; a dose of the latter, preceded by a moderate bleeding, will frequently give the most effectual relief, which but for that would have aggravated all the symptoms.

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* If the action of the heart be strong, we may bleed, although the pulse is feeble, and vice versa,—if the action of the heart be feeble and the pulse strong, we may not bleed at all, or with great circumspection. I have been long in the habit of observing this rule, and have never been misled by it.

† Notwithstanding the tenderness of an inflamed part, the pain caused by pressure, although an almost invariable concomitant, is by no means peculiar to inflammation; but is often connected with hysteria, or other nervous affections. In these, the exaggerated sensibility or tenderness, is confined to the surface, and is owing to excessive innervation of parts supplied by the peripheral extremities of the sensific nerves. Under such circumstances, pressure, whether local or general, even if continued for some time, and considerably increased so as to affect deep-seated, or internal parts, soon ceases to be felt or complained of, if the attention of the patient is diverted by conversation, or in any other way. To become diagnostic in inflammation, pressure should be made on a point, suddenly; which forces the blood out of the vessels where it is applied, into those adjacent, and produces an aggravation of the pain; why? because the vessels in an inflamed part are all in an over-distended, stretched, and resisting condition, which is increased by the displaced fluid, being forced into those immediately contiguous, by which they are still more distended and stretched, and the pain consequently aggravated. When pressure, instead of being suddenly and locally made, is applied gradually, generally, and equably, the pain will often be not only not aggravated, but actually alleviated;—for the pressure has, to a certain extent, lessened the quantity of fluid contained in the vessels. Upon this circumstance the utility of compression, as a remedy, depends. But if the vessels be not emptied by the pressure, additional inconvenience will be experienced from it as well as from the distending influence of their contents.

2. When has the proper quantity of blood been drawn?

By discriminating accurately between a preternatural fulness and distention of the heart and arteries as hollow organs, and an over-distended state of the capillaries, as in inflammation, involving many vessels, we may often pre-estimate how much blood should be drawn. When the accumulation is mainly in the cavities of the former, (the heart and arteries,) the abstraction of blood is direct, and likewise its effect; consequently, a small quantity will answer the purpose; but when the latter (the capillaries) are implicated to any considerable extent, the quantity must be larger, in order to cause them, like the heart and arteries, to feel that the mass of their contents has been lessened. As this mode of judging may not be deemed sufficiently accurate for scientific and practical purposes, the sensations of the patient, state of the pulse, action of the heart, &c., should be taken into the account as the principal and most reliable means for determining not only whether it is right and proper to bleed at all, but also when the suitable quantity of blood has been taken.

The rule then, is to let the blood flow until the pain abates or ceases; till the pulse flags or falters or syncope is induced, which last affords plenary evidence that enough has been lost. To that point, in severe cases, should the bleeding be carried—generally. In such as are milder, the flow of blood may be stopped when the changes in the pulse and feeling aforementioned are manifested. In cases of a mixed character, although some blood may and should be drawn, yet so much only as will relieve the fulness, or over distention of the capillaries need be abstracted. In such, and indeed in all cases in which it is practicable the patient should be bled in the erect or sitting posture, because he will generally become faint just when the proper quantity of blood has been lost, which in mixed cases will be small compared with what it would be if the disease had been purely inflammatory.

In every case and under all circumstances, in which bleeding at all is proper, it is desirable and even indispensable that a certain quantity of blood, proportioned to the severity of the disease, should be drawn before fainting is produced; and as some persons faint very easily, from fear or the loss of a little blood, it will be best to place the patient in a recumbent posture and allow him to remain in it until the quantity deemed requisite has been abstracted, when he may assume the sitting or erect posture and the blood still allowed to flow until syncope ensues. By so doing we may economize in the loss of blood and gain all the advantages, and avoid the disadvantages which may accrue from a bleeding. The question may be here asked with propriety, why is fainting to be considered one of the criteria by which to determine how far the loss of blood should be carried? In fainting there is, as has been remarked, a universal contraction or shrinking of the capillaries, as well those in the inflamed as in other parts. Nature seems, so to speak, to take advantage of the enfeebled state or temporary quiescence of the heart to force the contents of the capillary vessels back into the larger vessels, and likewise through the pores, which in health constitute a portion of the power antagonistic to that organ, but now, in consequence of its diminished action, forego their resistance; hence the sweating which so frequently

accompanies or follows syncope, and which is often cold, resembling that occasioned by the contraction of the capillaries in the moribund. If the fainting be incomplete, a warm sweat may be the immediate consequence. For an obvious reason we should be in no hurry to remove the syncope; as a general rule the longer it continues and the more slowly it goes off, the better.

3. When should the bleeding be repeated.

The return of the pain, after having been relieved by venesection, is a sign of the renewal of the *vis a tergo*, and also of the resistance of the capillaries and the pores; all of which, as in the first instance, call for the lancet—if slight, perhaps for topical bleeding only. When a repetition is proper, the quantity to be drawn is to be regulated by the rules already laid down under the second head.

As to a repetition of the bleeding, and also sometimes its first use, it is proper to remark that nice discrimination is occasionally required, in order to determine whether the local symptoms, especially when an internal organ is concerned, depend on an over-distended or an over-contracted state of the capillaries; the former produced by an augmented, the latter, by a diminished quantity, or vitiated quality of the fluids. The extremes here, as in many other instances, seem to meet—the sensations are similar—to all ordinary perception or discrimination, the same. To make the proper distinction may be difficult, but of vital importance; because, if in the first instance we stimulate, the patient may be destroyed; if, in the last, we deplete, the consequence may be equally unfortunate. If the pain and local symptoms arise from an exalted sensibility or an exhausted or depraved state of the fluids, narcotics, which diminish sensibility, and consequently prevent the vessels feeling the impressions made by the irritating qualities of the fluids, are the remedies which afford greatest, most relief. It is on this account, in part, that opiates are, as has been shown, so useful in the treatment of inflammation. The pulse, temperament of the patient, condition of the system and part affected,* are the sources whence our conclusions are to be drawn.

[P. S. The notes connected with this paper, were not read before the Academy for want of time, (one or perhaps two short ones excepted,) consequently, the writer alone is responsible for them, and their insertion in the journal.]

ART. V.—*Report of a Case of Poisoning by Tincture of Aconite—Fatal Result in two Hours.* By HENRY M. GRAY, M. D.

ALTHOUGH several fatal cases of poisoning by monkshood, are recorded by the English writers on toxicology, the writer is not aware that any have hitherto occurred in this country. In a medico-legal point of view, the importance of an accurate delineation of the symptoms, together with the mode of death, render it desirable that any authentic information upon this subject, should be recorded and preserved, and especially so, as this exceedingly energetic poison, has

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* See second note on page 334.

of late years become a fashionable remedial agent, and serious accidents from its improper use, are liable constantly to occur.

The subject of the following case was a healthy boy, 14 years of age. On the evening of October 3d. he had eaten an unusually hearty meal, and about 9 o'clock, complained of some slight uneasiness in the stomach, probably a slight enteralgia. A relative gave him a table-spoonful of what she supposed to be brandy in a cup of sweetened water. About five minutes after the dose had been swallowed, the boy placed his hands upon his abdomen, starting from his chair, and inquiring of his aunt what she had given him. Upon examination, the bottle was found to have contained about an ounce of the "Tincture Aconite Radex," of which she had given the quantity above mentioned, measured in a table-spoon.

Greatly apprehensive of the result of the mistake which had been committed, medical aid was instantly summoned. I saw him twenty minutes after the poison had been taken, and found him in the following condition.

His expression did not indicate suffering, but rather alarm and apprehension, due in some measure, without doubt, to the excitement of those about him. The skin was natural as regarded temperature, although there was some pallor of the countenance. The pulse 80, regular and moderately full. *His pupils* were *slightly dilated*, contracting sluggishly upon the approach of the light. He answered all questions rationally and concisely, nor could I discover any disturbance of the intellectual functions. Muscular movements were, however, very much impaired; for on attempting to walk, he required support, the head falling upon the chest, his limbs bending beneath him, and the hands, when carried to the head, were spasmodically affected. Deglutition was performed almost incessantly, yet without difficulty, nor did he complain of any burning along the course of the œsophagus or in the stomach. He expressed himself, that his head felt very heavy and full, but his vision at this time was not affected, nor was there defect in the sense of hearing. He had not yet vomited, although there was frequent retching, with the discharge of small quantities of mucus.

Sulphate of zinc, ℥j. was immediately administered, followed by copious demulcent diluents. Ice-water douche, applied to the scalp, mustard pediluvia and sinapisms over the epigastrium, spine, etc. In a very few moments after the administration of the emetic, copious vomiting ensued. The matters ejected, consisted of partially digested aliment and mucus. The smell was intensely acid, but I perceived no odor of aconite. He now, for the first time, suffered pain in the stomach and œsophagus, describing his sensations, as if his throat and stomach were on fire. He seemed to suffer great prostration of strength, being unable to raise himself in the bed, except upon the recurrence of the violent attacks of vomiting. About 40 minutes had now elapsed since the administration of the tincture, and his case presented the following peculiarities. The pulse was very slow, ranging about 45, regular, but compressible. Skin cool, especially the extremities, which already had the icy feeling of death. The pupils were now *widely dilated*, and almost insensible to the

stimulus of light. He complained of great numbness of his head, but none whatever of his limbs or other portions of his body. The internal burning sensation still continued, but the vomiting was less frequent and severe. Pressure over the abdomen caused some uneasiness. He still answered questions coherently, and several times requested that he might be allowed to get out of bed, and sit on the rocking chair. Complains that he cannot see, says the room is dark and begs that lights may be brought. Jactatition now came on, and several times he was quite violent, but was appeased with slight persuasion.

In addition to the diluent drinks, a large laxative enema was now administered; heat was applied to the extremities, and diligent frictions with stimulating liniments were made; brandy was administered every few minutes in tea-spoonful doses. Under this treatment a slight amendment took place; the pulse became fuller, some slight warmth returned to the skin, the face assumed a more natural expression, and the vomiting had nearly subsided. In this condition he remained for half an hour, when collapse again supervened. His respiration became slower and more laborious; there was *rigidity of the posterior muscles of the neck and trunk;* the surface became rapidly cold, and he was unable any longer to swallow. The pulsations of the heart were yet distinct and regular, though feeble. He was yet perfectly conscious—for observing spasmodic movements of the bowels, I encouraged him to attempt to pass the injection, which he did with considerable muscular force. In a few moments he died, the pulse stopping suddenly in the midst of a beat.

It is to be regretted that no opportunity was afforded for making an autopsy in this case.

In comparing the above case with those recorded by Christison, Pereira and Taylor, it will be observed that while some of the leading symptoms are analogous, others again differ in a marked degree. The contraction of the pupil, observed by them as an almost invariable symptom, was here absent, and dilatation was present from the beginning. Again, convulsions, stertor and stupor are described as leading features in most of the cases. In all the cases of poisoning from the alcoholic tincture of the root, there was "numbness and tingling about the throat, stomach and extremities, and contracted pupil." In the present case, no burning was experienced in the stomach or throat until after vomiting had taken place. The form in which the poison is taken, and the amount of the dose, will doubtless modify the symptoms, and the manner of death. When an overwhelming quantity has been given, the immediate sedative effect upon the brain and nervous system may be so intense as to paralyze the heart, and the muscles of respiration, so that death may ensue without those violent symptoms of irritation of the brain and stomach, which would result from a smaller dose. In the same manner, a dilated pupil may accompany that state of brain, where the primary effect of the drug has been that of a sedative, as occurs in poisoning by prussic acid, where the pupil is widely dilated. On the other hand, a smaller dose would probably act with greater violence upon the mucous membrane of the stomach, and if its action involved

the nervous system to any considerable degree, it would be that of an irritant, causing contracted pupil, head-ache and convulsions.

ART. VI.—*Case of Labor, where Delivery of the Child was accomplished through the Perinæum.* By S. C. ELLIS, M. D.

ON the 22d of December last, I attended the accouchement of Mrs. W., of Long Island. She was thirty years of age, had been married two years, and was in labor with her first child. When I arrived the child's head had commenced passing the superior straight of the pelvis, and in an hour or little more, it was pressing on the perinæum, which soon became very tense and thin. The expulsive efforts of the uterus seemed to be directed towards the anus, and there was really but little or no distention of the os externum vaginæ.

Fearing laceration, I supported the part with my hand, and used all the force that was prudent to induce the head to its proper exit, but it would not be governed by the considerable power applied, and I felt the perinæum gradually giving way under the palm of my hand like a piece of wet paper. I continued, however, to press to the vulva in a desire to save the sphincter ani muscle. All was of no avail, so far as natural delivery was concerned; for another pain drove the child's head through the perinæum, the whole body following instanter. Being anxious to see the exact nature of the wound, for the purpose of doing what might be necessary, I immediately introduced my hand through the opening and extracted the placenta, which was slightly adherent.

On inspection I found that the laceration began about an inch from the anus; first transverse and running from that on each side of the vulva, making a ragged irregular wound, at least one half of the vulva, including the entire fourchette, was hanging loose, and so completely detached that in the examination it was turned up and lay over the pubes.

Notwithstanding all this, I never attended an easier or more quiet labor, and a person in the adjoining room would have scarcely conjectured that another being was making its appearance on the scene of life. The lady complained not, neither had she any idea of the strange manner her fine large child had made his début.

To conclude, I placed the parts in position, put a light compress over the wound, after seeing the lochia discharge through the os externum, and in five weeks she was up and about, not experiencing, as she has at various times informed me, the least inconvenience from her rather singular labor.

In this case there was no time allowed to operate had I thought it necessary, and I am now pleased it so happened. Cutting through the fourchette would not have given so large an opening, and the sphincter muscle must have been torn through, occasioning a troublesome, and, to say the least, inconvenient state of things. Had there been a hymen, I think it would not have been destroyed.

As this kind of case is not of very usual occurrence, I deemed a report of it might not be uninteresting to the profession.

PART SECOND.

CRITICAL ANALYSIS.

ART. VII.—*Lead Diseases.* A Treatise from the French of L. TANQUEREL DES PLANCHES, with Notes and Additions on the Use of Lead Pipe and its Substitutes. By SAMUEL L. DANA, M. D., LL.D., Member of the American Academy of Arts and Sciences, Corresponding Member of Boston Society of Natural History; of the Academy of Natural Sciences, Philadelphia; of the National Institute at Washington. Lowell: Daniel Bixby & Co., 1848. 8vo. pp. 441.

THIS is an American translation and abridgment of a valuable French work. The original treatise is in two volumes, octavo, comprising eleven hundred and two pages, and was crowned with the Montyon prize of 6,000 francs by the Royal Academy of Sciences, in 1841, the committee consisting of Roux, Magendie, Serres, Larry, De Blainville, Savart, Breschet, Dumeril, and Double. By the advertisement of the translator and editor, we learn "that in condensing the work he has aimed to give faithfully the meaning of the author without confining himself to a simple translation of his language, and that in selecting portions of the original to form the body of this work, he has been guided more by the practical than the theoretical results and views of the author." The work has been divided into parts and chapters, a feature not in the original; this circumstance alone, there can be no doubt, will materially facilitate the reader in obtaining a more ready knowledge of its contents, and will greatly enhance the value of the translation as a volume of reference to the general practitioner.

In the September and November numbers of this Journal for 1844, there appeared a very lengthy and able review of the original work of M. Tanquerel from the pen of the late Samuel Forrey, M.D., the superior talent and ability evinced in that analysis, and the circumstance of its comparatively recent occurrence will of necessity preclude an analysis of the body of the translation at this time, our present duty being confined to the additions contained in the appendix of Dr. Dana. This appendix comprises seventy-two pages, the first seven of which treat "*Of the Existence of Lead and Copper in the Human System.*" Involved in the question of the existence of

these substances in the human system, are points of the deepest interest to the departments of pathology and legal medicine. The father of organic chemistry, Chevreul, as early as 1824, pointed out a classification which, according to Dr. Dana, is that best adapted to give clear views of the state in which these metals exist in the human body. It is as follows:

1st. Principles absolutely essential, which may not be replaced, and life continue.

2d. Principles necessary, but which may be replaced by others.

3d. Principles accidental, neither essential nor necessary.

In this last class, says Dr. Dana, it will be safest to place, at present, lead and copper. Devergie entertains the opinion of Chevreul. Orfila believes that lead is a normal ingredient of the human system. Since his views were published the fact has been confirmed by Ollivier (d' Angers), Harvy, and Boutigny. In a memoir read before the Royal Academy of Medicine in 1845, M. Devergie deduces the following conclusions:

1. All organs of man contain traces of copper and lead.

2. The proportion increases with age; it is small in the new-born infant.

3. Prolonged sickness, where alimentation is deficient, remarkably diminishes the natural quantity of copper and lead.

4. This effect is due to the origin of the metals in the aliment.

5. Copper always exceeds the lead.

Danger and Flandin strenuously deny the soundness of the opinions of the foregoing authorities, they do not believe in the existence of natural, or as they term it "physiological copper and lead." In speaking of its presence in the blood, of the sources from whence it is derived, and of the mode of its detection, &c., as stated by Millon, Dr. Dana says—

A process for detecting lead and copper and other inorganic substances in blood, more refined than any which has ever before appeared, has been recently proposed by Millon. Its simplicity is equalled only by its delicacy. It is truly an analysis of the blood *via humida*, and seems to settle forever the question before us. In this process, blood is drawn immedately from a vein into water, then introduced into a jar of chlorine gas. It immediately coagulates, becomes disorganized, a brown precipitate falls, containing all the animal or organic matter, while all the salts and inorganic matter remain in solution in the water. This separation is so complete, that the organic precipitate, incinerated in a platina capsule, leaves only so slight a trace of the salts, that it may be due to the water which moistened the coagulum, while, if the water is evaporated dry, the residuum, burnt in the combustion tube, gives only traces of organic matter, due to the minute portion held in solution by the water.

If the water is weighed before and after the separation of the coagulum, the increase of weight represents that of all the salts in a given quantity of blood, so that one may operate on a known weight of filtered liquid, as on a determined weight of blood.

Blood, examined by this process, besides silex, iron, manganese, always exhibits copper and lead. The proportions are in 100 parts of the dry residuum from evaporation of the water.

Silex, . .	1 to 3	Lead, . .	1.0 to 5.0
Manganese, .	10 to 24	Copper, .	0.5 to 2.5

Are the lead and copper diffused generally in the blood, or confined to the sanguineous globules? M. Millon, from his experiments, decides that these metals are fixed with the iron in the globules, and share with it organization and life. (*L'Institut.* No. 372, Jan. 1848, *in Edin. Phil. Jour.* Ap. 1848.) It seems, therefore, that copper and lead exist naturally in the blood wherever that has been examined to detect these metals. Whether this fact will prove to be universally true, remains to be proved. Whence does the blood derive these elements? The answer is obvious—from the drink and aliments. In society, where all articles of food are so liable, as has been shown in the body of this work, to come in contact with copper and lead, it is not difficult to admit the aliments are a source of these metals. But Legrip, (*Journ. de Chim. Méd.* May, 1847,) has found copper and lead in the organs of a cow, the metals here preserving the quantitive normal relation as in man; Chevreul has found copper in beef. These must have been derived from the natural food of the animals, unsophisticated, doubtless, by the artificial processes of society. This opens the question, Do vegetables naturally contain copper and lead? Numerous chemists, Bucholz and Meissner, who first noticed copper in vegetables, Gahn, Vauquelin, Berzelius, Sarzeau, who, finding copper in plants, first suggested its occurrence in man, Boutigny and others have shown the existence of copper in a great variety of plants, fruit and grain. Its presence in wheat has long been established, and its quantity determined. From the quantity of wheat annually consumed in France, Orfila has calculated that about 8000 lbs. of copper every year enter the bowels of the inhabitants, from this source. At the meeting of the Academy of Sciences in Paris, January, 1848, Deschamps attempted to show that all soils contained copper as carbonate. It is dissolved by the carbonate of ammonia, and so is carried into plants.

The natural existence of lead in plants is not authenticated, but its frequent fraudulent presence in tea cannot be doubted. Whatever may be the source of copper and lead in the organs of man in certain cases, the presence of copper naturally, in some shell-fish, as shown by Bourchardat, and very recently by Harless, in the blood of the ascidia and cephalopoda—as *Cancer pagurus, Acanthias zeus, Conger vulgaris, Eledone, Helix pomatia, &c.*, shows that copper is not confined to warm-blooded animals only.

A very interesting question naturally arises, viz.: "Is the quantity of lead naturally found in the human system increased in lead diseases?" The researches of M. Devergie, Drs. Todd and Miller of King's College London, Dr. Inman of Liverpool, and Orfila, all go to confirm us in the opinion that this is the case. Orfila has found lead in the liver of lead patients, and in his paper read before the Academy on this subject in June, 1847, he establishes the fact, "that lead and copper, existing naturally in the body, may be always simply and easily distinguished from that causing disease and death."

While speaking of the use of sulphuric lemonade as a prophylactic for those exposed to the poison consequent upon the manufacturing of white lead, Dr. Dana gives the opinion, that from the facts evolved in the dispute of Gendrin and Tanquerel on this subject, the inference may be drawn, that while the most sanguine expectations of the advocates of sulphuric lemonade have not been fully realized, yet a degree of success has attended its use, both as a preventive and curative of lead diseases, which by no means allow it to be ranked as inefficacious, as represented in the body of the work, by Tanquerel himself. But we pass by the remaining part of this portion of the subject, in which the use of the sulphuric bath is considered, and take up that portion of the appendix which treats of "*The use of Lead as a Conduit or Reservoir for Water for domestic purposes.*"

The facts which are evolved in the consideration of this portion of the work, are arranged under three heads, viz.:

1. The effects of well water.
2. The effects of spring water remote from habitations.
3. The effects of rain, pond, lake, and river water.

That well water differs materially from other natural waters does not admit of doubt. That this difference consists mainly in the presence of a great abundance of nitrates and carbonates, is equally certain. It is a matter of every day observation that well water corrodes very readily lead pipe, when used for conducting purposes; and according to Dr. Dana, it has been satisfactorily shown that lead pipes used in wells, in some cases have been perforated in six months; others, in the course of one, two, and three years; and that lead diseases from this cause are very common, he considers is equally demonstrable. These apparent assertions are based upon a goodly number of facts, which, were our space sufficient, we should give.

That spring water, being in fact nothing but the gushings of natural wells, produces similar effects, but in a much less degree, is equally certain. In illustration of this, Dr. Dana gives several instances, one of which we will give in the author's own words.—

I have seen lead pipe which conveyed spring water, at Jamaica Plain, Roxbury, which was very much eroded and slightly perforated by the enlargement of an original defect in a part of the pipe. The water was very pure, and yet, notwithstanding a deposited coat of oxide and carbonate of lead had occurred, the erosion continued, and lead was dissolved at the end of eight years' use of the pipe. This was conclusively and positively determined, by finding lead in solution in the water, by analysis, before inspecting the pipe; and without the aid of analysis or inspection, the fact of continued corrosion might have been inferred from the abdominal pain, amounting to colic, and many other symptoms of unmistakable lead disorder which occurred in one person, whenever he drank this water.

Dr. Dana cites a remarkable instance, which occurred at Dedham, Mass., in the person of an eminent divine; and a similar instance occurred in the State Lunatic Hospital at Worcester, Mass., in 1843. The case of the Tunbridge water, in England, cited by Dr. Christison, in his work on Poisons, is another well-marked illustration of the impropriety of its use under certain circumstances. A multitude of facts are cited in confirmation of the truth of the proposition stated above, but our time or space will not allow of going into detail.

In regard to the effects of rain, pond, lake and river water, Dr. Dana thinks the same circumstances attend its use.

From repeated observations, it has been clearly demonstrated that the corroding effect of water continues even after a crust or coating has formed; and so long as the pipe is used. Such being the fact, it becomes necessary to inquire how far the use of lead pipes for conducting Croton water in our own city are admissible. Dr. Dana has furnished some data on this point, and as it is contained in a series of conclusions embracing other waters than our own, we will give them entire.

1. The water of Merrimac river, flowing through a country emphatically granitic, I find holds lead in solution when drawn through a lead pipe which has been in use for its transmission eight years, the water having stood in it some hours.

2. The water of Jamaica Pond, drawn from the leaden pipes in Boston, which had been in use several years as service pipes, I found, in 1844, contained lead in two instances brought to my notice.

Dr. A. A. Hayes has detected lead in the water of Jamaica Pond, drawn from the lead pipes in Boston, supplying it for domestic use in such numerous instances, and under circumstances so various, that it is impossible longer to doubt the continued erosive action of that pond water on lead pipe in actual aqueduct use.

3. Croton water, drawn from lead service pipe, which had been in use from the date of the introduction of that water into the city of New-York, was found in my analysis in 1846, to contain lead in solution.

Dr. James R. Chilton, a distinguished and acute analytical chemist of New-York, has also repeatedly detected lead in Croton water, drawn from lead pipes in that city.

These pipes, had, in some instances, been in use for many months, even a year.

4. Croton pipes, removed at the end of several months, are found to be much eroded in many cases. Those which had been lined with tin were found to have that coating removed in many points, and the lead there pitted. How long this action of erosion had been occurring, can be conjectured only, but as there was no evidence of its cessation, so neither is it to be inferred, that such deep corrosion could have occurred in the first few days after the pipe was used to transmit water.

The evidence of continued action of Croton water on lead, derived from chemical analysis, is supported by the fact, that at least one member of the family using water from the source whence was drawn that analyzed by myself, was affected with lead malady.

In this case, the evidence of the existence of lead paralysis and arthralgy, with many other symptoms so well described by Tanquerel, is undoubted. On ceasing to use Croton water drawn from lead pipes, the symptoms of lead malady disappeared. They were renewed when the patient, residing in the summer in the country, drank rain water which had been transmitted through lead. Thus showing it was not Croton water, but the lead it had dissolved, which was the cause of disease.

Besides, this is not an isolated case; Dr. Chilton states that several persons had been made seriously ill from drinking Croton water from lead pipes in a house in New York, (which had been closed for some time previous,) and that he had detected lead in it. (*Rep. of Consult. Phys. of Boston*, 1848.)

5. I have examined small sections of lead pipes, which had been in use transmitting the water of James River, at Richmond, Va., about twelve years. There was a fine reddish colored, and quite smooth and compact coat deposited on the inner surface of the pipe, which was easily detached, showing evident and unmistakable marks of erosion, by small pits and thread-like channels.

Pipe from Baltimore showed a less compact coat, but quite as evident marks of the action of water, which had occurred in this pipe, for several years in use.

"These facts," says Dr. Dana, "abundantly prove that lead pipe in actual use transmitting natural water, whether rain, spring, well, pond, lake, or river, is eroded or dissolved by that water, as long as the pipe is used."

There can be but little, if any, doubt, but that the foregoing propositions are true as general statements, (Dr. Dana, himself, points out exceptions,) and as such, they call loudly upon all classes of our citi-

zens, as well as those in authority—and particularly physicians, to be ready to appreciate and detect the first development of those anomalous, delusive and diversified symptoms which arise from the poisonous effects of lead, and which we must ere long not only expect, but actually meet with, owing to the constant and universal use of lead pipe as a conductor of Croton water in this city. Bearing in mind these facts, we ought not, even for a moment, to allow our opinions to be influenced, or our judgments warped, by the comparatively limited testimony which a few months or years furnish—each day brings with it an accumulation of the deposit, and cases of lead disease which may be accounted for satisfactorily to-day upon a supposition of idiosyncrasy or particular susceptibility, the cause of which is present and at work, is gradually increasing, and will, next month or next year, there is scarcely a doubt, develop disease in constitutions where no particular susceptibility exists. Here, then, may be seen the importance of preventive measures—measures which Dr. Dana has considered when speaking *of the proposed substitutes for lead.*

Under this head, Dr. Dana considers separately the various metals, alloys, &c., which have been proposed as conductors of water for domestic and culinary purposes. From a review of the testimony furnished while treating of lead as a conductor, it is clearly to be seen, that although at first but in a small degree injurious, still after a time the oxidization which is constantly going on, soon renders it not only injurious, but positively dangerous for such purposes. This being the case, the question naturally arises: what shall be substituted—cheap, efficacious, and wholesome? "Among the metals, copper, tin, zinc, or their alloys with each other, or with lead and iron, have been proposed." Either of the above-named metals, in a pure state, would be acted upon with the same facility that lead would. Experience has taught, that alloys were less acted upon than the separate metals; but even these are sufficiently acted upon to prevent their safe adoption for the purposes now under consideration. Among the various articles of this class (alloys) which have been examined, that of copper, coated with pure tin, is least objectionable. Such it appears, are the views of Dr. Dana; and in closing this subject, he makes the following recommendations:—

1st. Wood should be preferred wherever it can be used.

2d. Cast-iron or wrought-iron tubes.

3d. Copper, protected completely by pure tin.

The use (says he) of all other metals, and alloys of these, in the present state of our knowledge and experience on these subjects, ought forthwith to be abandoned.

Such it appears is the assertion of a member of our profession who has devoted especial attention to the subject which has demanded and called forth a thorough and protracted examination, which has led to the adoption of opinions which will stand the test of time. For one we are exceedingly pleased that Dr. Dana, has entered into a consideration of this subject so fully, and we doubt not that the facts which his perseverance, skill, and industry, have furnished, will, for a long time to come, be looked upon as conclusive on this

subject, which will render his opinions second to none in this country. In Great Britain, the researches and writings of Prof. Christison on this same subject, have more than any one thing else contributed to the development of his present extensive, wide-spread and honorable reputation. A fact which of itself furnishes additional evidence of the importance which of necessity surrounds the subject. Such being the case it will not, we sincerely hope, be deemed profuse praise when we say that we look upon the evidence furnished in the appendix as the most valuable contribution to public hygiene which has for a long time been presented to our consideration, and ranks its author among the first original observers of which our own country at the present time furnishes. To his portion of the work may, with equal propriety, be applied with very slight alteration the opinion given in the notice of the original work of M. Tanquerel, viz: "It contains the results of long and careful observation and experiment, by one who possessed opportunities which fall to the lot of but few. The author states what he has himself witnessed; he has collected and arranged a multitude of facts, and drawn his conclusions from them. He gives an account of diseases, their history, symptoms, the mode in which they were contracted, &c. The work is one the interest and utility of which are not confined to the medical profession alone. It is one from which all who have any thing to do with lead, may learn something. Even as a matter of enlightened curiosity, the information which it conveys is worth having; but this is trifling compared with its subservience to the cause of humanity." (*Forry.*)

The typographical execution of the work is excellent, the paper good and we hesitate not to recommend it to our readers as the most complete and valuable treatise within the reach of the purely American or English reader.

ART. VIII.—*Observations on Surgical Diseases of the Head and Neck.* Selected from the Memoirs of the Royal Academy of Surgery of France. Translated and Edited by DREWRY OTTLEY.—London: Printed for the Sydenham Society, 1848. 8vo., pp. 293.

THE works already published by the Sydenham Society need no commendation from our pen, as their intrinsic value has long since been acknowledged by the profession. The great merit of the work before us will, we have no doubt, be found in the purely practical character of the individual essays which make up the volume,—composed as it is of an (we had almost said) innumerable number of facts, carefully collected and analyzed by such men as Quesnay, Lassus, Louis, Ferrand, Bordenave, Martiniere and Malle. The subjects treated of comprise some of the most important in surgical science; and the essays, we regret to say, are accessible to but few American surgeons. Owing to these circumstances we have thought best to give the volume before us as extended and minute an analysis as the limits of our Journal will permit.

From the preface of the translator and editor, we learn that from the organization of the Royal Academy of Surgery in 1731, to the commencement of the French revolution in 1798, five quarto volumes of the Transactions were published, comprising essays on almost every department of surgical science, many of which upon examination were found to be more theoretical than practical; and some had become too entirely obsolete to be worth translation. The council of the Society therefore, decided upon giving a selection of some of the most important and practical papers. And in order to give the volume a definite character, it was determined to confine the selection "to those memoirs in which diseases and injuries about the head and neck are treated of." A sub-committee of the council was appointed to examine the memoirs more fully. Those included in the present volume, are the papers selected and approved of by the sub-committee and council.

The first 41 pages comprise an essay by M. Quesnay, entitled "*Summary of Observations on the Use of the Trepan in Doubtful Cases; in which an attempt is made to determine the reasons by which the Surgeon should be guided in deciding to employ or abstain from this Operation;*" with "*Remarks on the Use to be made of Observations.*" This paper commences with the remark, that "among the various signs which may determine a surgeon to employ the trepan, none is considered more clearly to indicate it than fracture of the scull, accompanied with depression or displacement of the bones, or fragments of bone, wounding the brain or its membranes; and still more so, if the opening caused by the fracture do not afford sufficient room for their removal." Under such circumstances," says M. Quesnay, "surgeons have considered the use of the trepan indispensable." To these conclusions observation frequently appears opposed. And the author proceeds to determine, in as clear a manner as possible, the value of cases bearing upon these doubtful points.*

Observation I. is the report of a case by M. Avellan.

A girl, aged fourteen, received a blow upon the head, which produced depression of the right parietal bone, followed by stupor, efforts to vomit, and delirium. The trepan was indicated, but the mother of the girl absolutely refused to permit it. "The stupor and delirium lasted three months, which kept the patient in a state of imbecility." Gradually the depression became less, the bone returned to its level, and the symptoms entirely disappeared.

Obs. 2d.—M. Duprez attended a child aged 10 years, who fell from a height and struck upon the top of the head. Two tumors formed, one over the frontal and the left parietal, the other over the right parietal bone. They were opened, when it was found that there existed fracture and depression, with effusion of blood on the dura-mater. The trepan was decided upon, but the operation was delayed and finally became unnecessary. Separation of the coronal suture took place, through which the blood passed off and the symptoms disappeared. On the fiftieth day exfoliation of the external table of the left parietal bone took place; the wound soon after healed kindly.

The foregoing cases show that the use of the trepan is not indis-

* This and the following cases have been somewhat condensed; great care has been taken, however, to preserve all the facts of the cases in their native force and integrity.

pensable, although there is but little doubt that the recovery in each was protracted and rendered dangerous by not resorting to its use.

Obs. 3.—M. de la Peyronie was called to attend, in consultation, a patient, aged 80, who, thirty-five days before, had been struck on the centre of the parietal bone by a door which made a wound which laid bare the scull. He found a sinus which he dilated and thus discovered a fissure of the scull. There had not been, nor was there at that time any symptoms which would lead to a suspicion that extravasation existed. It was thought best not to trepan, but wait for exfoliation. At the end of three months a portion of both tables separated as large as a twenty-four sous-piece, removing the fracture and leaving the dura-mater bare.

"This case," remarks M. Quesnay, "shows that injury of the scull may render the use of the trepan necessary, even where there is no depression or extravasation." The following case also confirms this fact.

Obs. 4.—A man received a blow upon the head which caused no wound or apparent contusion. Severe symptoms, however, followed. An incision was made over the point where the blow was received, but no fracture was found. An antiphlogistic treatment was pursued. This mitigated the symptoms in a measure, but soon after convulsions set in, followed by depression, and the man died three months after the reception of the injury. After death a fracture at the base of the scull, without effusion, was found, "commencing in front of the mastoid apophysis and extending through the petrous portion of the temporal bone and the sella turcica." A separation of a line in width existed.

It was believed that death resulted in this case from the non-union of the fracture, and had it occurred in a situation where the trepan could have been used, this and the previous case would "seem to favor the opinion that as a general rule we should apply the trepan wherever there is a fracture." To the adoption of this apparently justifiable conclusion he objects, and says, "we are convinced by a number of facts, ancient and modern, that many fractures and depressions are cured without the use of this instrument, and such examples have for a long time led some surgeons to believe that more fractures would be cured without the trepan than with it."

The symptoms, remarks M. Quesnay, furnish no more certain guide; for the immediate symptoms are unimportant or there may be none, even in cases of fracture accompanied by effusion or injury of the membranes or brain; and if delay is determined upon, consecutive symptoms may arise, and the result of the case prove that the warning came too late for the trepan to be of any service. "It is, therefore, only in cases where we have nothing but the symptoms to depend on, that we ought from them to decide on the employment of the trepan, and for this very reason, that there being no apparent lesion of the scull, we have nothing else to guide us; but when there is a fracture or depression, we ought not to depend on symptoms or wait for them, because we have already sufficient data and less dangerous ones than those consecutive symptoms which surgeons

would have us look to." The following case illustrates the fact that there are cases where, if we act circumspectly, the trepan may be dispensed with.

Obs. 5.—A child, aged 5, fell from a height and fractured both parietal bones. M. Gallait was called and found beside the fractures a tumor below each. It was laid open and the extravasated blood evacuated, when it was found that the bones were elevated, but could be depressed by the fingers. There were no urgent symptoms and Mr. Gallait was led to postpone the operation of trepanning. He was governed in this decision by the fact that there existed a separation between the fractured parts which might allow the egress of any portion of extravasated matter. A compress was put on and confined by a bandage. At the end of three weeks the child was perfectly well.

This case shows that the operation may be dispensed with when there is a separation of the fracture sufficient to admit of the flow of extravasated blood; this, however, only applies to cases where the effused fluid is external to the dura-mater; and not when the extravasation is beneath the membrane. The separation of the fracture may not be sufficient to allow us to discover this latter condition, and death may result from its presence; a case is given in illustration of this fact.

When there exists fracture of both parietal bones accompanied, by depression, &c., and there is a separation of the bones of only one side, the surgeon should apply the trepan on the side where there is no separation, as the following case illustrates.

Obs. 7.—A patient was seen by M. Mouton lying insensible and apparently dying. On examining his head an elevation over the whole length of the sagittal suture existed. On laying it open a separation of the suture was found, through which extravasated blood flowed. On the following day delirium came on, and the trepan was resorted to on each side of the suture. Under the right parietal bone was found a large quantity of extravasated blood which was removed. On the left side it had escaped previous to the operation. The threatening symptoms immediately ceased and the patient recovered.

M. Marchetti speaks of a similar case in Obs. 15th. These cases led M. Quesnay to believe that independent of symptoms we ought to be very attentive of the possibility of such circumstances.

That the surgeon can in most cases decide on the course to be pursued in cases of fracture, depression, or contusion of the scull, there can be but little doubt, but there are cases where the most able are embarrassed, and these are cases of blows on the head, without evident lesions of the bones, or apparent contusion of the soft parts, which may sooner or later give rise to severe symptoms. The adherence of the pericranium has been considered by some as a certain evidence of the absence of fracture, and vice versa when there is a separation of this membrane, there is a fracture or contusion of the bones which require the trepan. Some have decided on its use by conjectures founded upon the supposed force of the blow, some wait for severe symptoms before they operate, while others combat them by frequent bleedings, &c. M. Quesnay remarks, that he "shall endeavor to discover in these very instances of suc-

cess the circumstances, or peculiarities, which may assist us to distinguish the cases in which we can attain most certainty as to the course to be followed."

Obs. 8.—A man fell from a height and struck upon his head with such violence that the right eye started from its socket and hung upon his cheek. He lost his senses and soon became lethargic. M. Gallait found a contusion over the right parietal bone. The pericranium was not separated from the scull, and this led him to conjecture that there existed no fracture. The stupor was referred to concussion of the brain. The patient was bled fifteen times in forty-eight hours. The patient became sensible on the ninth day, and at the end of a month was well.

The frequent occurrence of cases like the foregoing led M. Petit to remark, that when stupor and insensibility came on immediately after the injury, that they were owing to concussion, but if they appeared some time after its receipt, then they indicated effusion. There are cases where insensibility and stupor may be produced by concussion, and no effusion come on afterwards. Here, again, the surgeon may be in great doubt, as the following case illustrates.

Obs. 9.—A man, aged 25, fell from a height and struck upon his head, producing a small wound on the left side of the frontal bone. He immediately became insensible. M. Boudon found him in a lethargic stupor, and on making an incision found the pericranium separated from the scull but no fracture. The patient was bled six times in three days. On the third day no amendment, clysters were administered, and he was bled from the foot; two emetics; an ounce of tobacco in an injection was given. The symptoms continued until the eighth day when sensibility and partial consciousness returned. On the evening of the same day he relapsed back into his former state, which gave strong suspicions of effusion. The trepan was strongly indicated, but still was not resorted to. The same line of treatment was persevered in, and on the eighteenth day consciousness returned and the patient recovered; there remaining slight deafness and entire loss of memory for some time afterwards.

In his remarks on this case, M. Quesnay says, in cases like the foregoing "success is not sufficiently common, and the indications for the trepan is too well founded to allow our abstaining from its use, unless there are some particular reasons which may decide us to adopt another course; this is the safest practice, the most approved, and the best established by experience."

Obs. 11.—A lad, aged 12, received a kick from a horse which drove in both tables of a portion of the frontal bone, just above the frontal sinus. M. Pineau found him, immediately after, insensible and passing his urine and fæces involuntarily. He was bled, but owing to the interference of a quack, the parents would not allow the trepan to be applied. M. Pineau saw him at the end of eight days, and the operation was performed. A pint of blood flowed from the opening made. Half an hour afterward the patient recovered his senses. On the seventh day after the operation he ate imprudently and there soon after followed fever and pain in the right hypochondrium. He was bled twice, and every third day a purge administered. At the end of three months the cure was perfect.

Obs. 12.—M. de Garengeol was called on to open the body of a woman who had received a blow with a fist over the temporal muscle. Stupor immediately followed, and the patient lived ten days in that state. On examination no fracture existed, but beneath the scull and on the dura-mater a large quantity of extravasated blood was found.

M. Quesnay says, that in M. Pineau's case the fracture afforded a complete indication for the use of the trepan; "for the insensibility which occurred at the instant of the blow, and which continued unchanged, would not without the fracture have afforded a sufficient indication for that operation; for though there are many instances of such a loss of sense being attended by extravasation, the great majority of cases prove that it is almost always due to concussion, and we may here observe, that this cause sometimes gives rise to very serious symptoms along with the insensibility, for the relief of which the trepan would be useless.

Obs. 13.—A woman aged about 40, fell backwards in going up stairs. M. Manteville found her pulseless and senseless; she soon vomited blood; there was a little redness at the posterior and inferior part of the right parietal bone. She was bled seven times during the first four days. On the fifth the insensibility continued, the patient tossed and moaned; the following day convulsions set in—the bleeding was repeated, and an incision made over the injured part; the pericranium was found adherent to the scull, and there existed no fracture—one hundred and sixty ounces of blood in the course of nine days were taken; sensibility was gradually restored, but two years elapsed before complete recovery took place.

"Although the severe symptoms supervening, in the foregoing case, on the loss of sensation which had immediately followed the accident yielded without the trepan, we are not of the opinion, setting aside for a moment the conclusion to be drawn from the adhesion of the pericranium, that this course should be followed in a similar case. On the contrary, we think such an increase in the symptoms denotes a corresponding increase in the cause, and that that increased cause is almost always an effusion under the scull or in the brain—the former the most frequent." M. Quesnay inclines to the opinion that the attachment or detachment of the pericranium furnishes no proof against the latter or in favor of the existence of extravasation, although many of the previous observations may appear to favor the idea. He then goes on to relate cases illustrating this point more fully. After which he describes a form of contusion of the scalp, attended with extravasation of blood under the pericranium, which is strongly calculated to deceive the young surgeon into the belief that fracture with depression exists. In such cases, the circumference of the tumor is firm and elevated, the centre soft and easily depressed, giving rise to the suspicion of depression; it occurs most frequently in young subjects, and is dependant upon effusion of blood under the pericranium.

Obs. 19.—A soldier received a blow from a stone, from which he fell to the ground in a state of insensibility—it soon passed off, two contused wounds over the parietal bone, but no other injuries, were observed. On the fourth day he had fever, and complained of pain in his limbs; the parts were re-examined, but no appearance of external injury was found; bleeding was again resorted to, the patient's right leg and arm became paralyzed, delirium with rigors came on, and the man died on the eleventh day. On inspection there were found a fracture of the inner table of the scull beneath the point where the blow was received, a teaspoonful of pus on the dura-mater, and an abscess beneath it.

This case furnishes an example of what has been, and still is termed, *contre-coup;* such cases are occasionally seen, and require the best skill of the surgeon to distinguish them. By some surgeons they are believed to be produced by a double blow received by the patient. The possibility of their occurrence "should render us attentive to these sort of fractures, whether they result from *contre-coup* or from a double blow." "The occurrence of symptoms some time after the wound, as detailed in the foregoing observations, is always sufficient to justify us in deciding to trepan." Secondary symptoms may be produced by the formation or presence of pus upon or under the dura-mater, as the following observation shows:

Obs. 23.—A young man received a blow from a stick on one of the parietals, which was followed by symptoms of extravasation. M. Mouschal proposed the trepan, but the council which was called o jected, on the ground that the symptoms were not sufficiently severe to require it. The patient recovered his senses soon after the injury. On the sixteenth day, had fever and a rigor—the trepan was resorted to, and a large quantity of pus escaped, and the patient soon recovered.

It is evident from all these observations, that in injuries of the head, the "symptoms are our only data on which our decision rests as to the use of the trepan." Some of these cases also show that the abstraction of blood must be frequent and large in order to prevent extravasation. Also that no dependence can be placed upon the state of the pericranium as an indication. These observations further show that insensibility produced at the moment of the blow, accompanied by fracture, should not lead us to adopt its use, but that a close watch should be kept for the after-symptoms which may present themselves, indicating effusion, "for in such cases the symptoms which the effusion will not fail after a time to cause, are our only guide."

A different value, remarks M. Quesnay, should be attached to the absence of symptoms in cases of injuries caused by fire-arms, all great practitioners believing in the necessity of the use of the trepan in these cases. Two cases are related, bearing upon this point. We select the following:

Obs. 25.—A lieutenant was wounded by a spent ball, a little above the right frontal sinus. The patient was stunned for a moment, which was completely removed by bleeding, after which the patient appeared perfectly well. At the end of three weeks he fell into a lethargic stupor. A council was called, and the trepan was used, which gave vent to a large quantity of pus collected under the scull. The operation proved useless, as it was performed too late.

In these two cases, remarks our author, conjectures as to the force of the blow could avail nothing.

Following the relation of these cases and remarks, are some excellent observations on the best mode of treatment of cases, where severe pain is suffered in the part wounded for a long time after the main symptoms of the case have subsided, and the wound has healed. In such cases he has known recovery to take place after spontaneous exfoliation of the part injured.

In his "*Remarks on the Use to be made of Observations,*" he says, "that the contradictions to be found in many of the observations we have related, may serve to show how dangerous it is to be guided in practice by the observations of others, when each particular observation is considered as a model, when successful cases only are looked at, and when we have undue respect for the opinions of the master who have related them." He then goes on to analyze the contradictions of each case which the careful reader will have already seen; he declaims against the practice too frequently pursued of drawing conclusions from isolated cases. Nature should speak to us in her own language and we should only attempt to interpret it when aided by the combined light of large practical experience and sound theory.

The 2d memoir in the volume before us is also by M. Quesnay, entitled *Remarks on Wounds of the Brain, in which it is proved by numerous observations, that the brain is susceptible of various operations which may frequently save the life of the patient, and in which an inquiry is instituted respecting the remedies best adapted to the treatment of wounds of that organ.*

The ancients believed that any injury of this important organ was certain death, but observations long since have shown that wounds of the "cortical and medullary substance heal almost as readily as wounds of most other viscera." In illustration of this remark M. Quesnay, in this paper gives the particulars of a number of cases where recovery took place after severe wounds of this organ. "The knowledge of these facts, he remarks, is in one point of view particularly important to surgeons; for not only the cases we have related, but many other similar ones which are to be found on record, should encourage us to treat wounds of the substance of the brain, however considerable they may be, with all possible attention." The cases related also serve to show, that in certain desperate cases we may attempt operations, which the circumstances or symptoms of the case indicate, such for instance as opening of abscesses, removal of tumors, of foreign bodies, or portion of the brain itself, &c. The propriety of which is confirmed by a number of cases given in the memoir.

The 3d paper is a "*Memoir on Wounds of the Superior Longitudinal Sinus.* By M. Lossus. This paper contains the details of a number of experiments made upon animals, which the author performed to settle in his own mind, the propriety or impropriety, as the case might be, of performing operations over an opening into this sinus. It was the general belief, previous to his time, that a wound of the longitudinal sinus would give rise to fatal hemorrhage. The experiments detailed, and the cases cited in this memoir, prove that "an opening of this sinus cannot produce a hemorrhage which would require any extraordinary measure," and that even a part of the sagittal suture may be removed by the trepan, should the surgeon deem it desirable for convenience of position, to operate at this point. The following case is one of no ordinary interest.

Case 2.—A boy, aged 8, received a blow with a stick on the head from his tutor; he was giddy for a few moments. Some time after, a tumor about

the size of a walnut appeared; it was indolent, and appeared to contain fluid. M. Lassus divided it with a knife, venous blood flowed, its flow continued, and upon examination it was found that fracture of the sagittal suture existed, a portion being forced through into the sinus. A council being called, after a good deal of delay and opposition, a portion of the cranium each side was removed, (it not being possible to remove the piece which was lodged in the sinus without,) after which, by means of the forceps it was extracted, a flux of blood followed, a dossil of dry lint being held upon it for a few minutes caused it to close, and the patient entirely recovered.

There can be but little doubt, that "surgeons have often been deterred from undertaking a beneficial operation, which a knowledge of the experiments and cases detailed in this paper, are well calculated to dissipate. M. Lossus closes this memoir by saying, "that the object of this paper is to endeavor to banish the fears that have been erroneously entertained respecting the danger of wounds of the sinuses of the dura-mater, and to show the advantages to be derived from trepanning over the sutures in cases of necessity." We have long since been of the opinion, that the only valid objection to the operation over sinuses, to the careful surgeon, is the firm adherence of the dura-mater to the cranium at this point.

The next memoir, is an "*Examination of the doctrine of Ancient and Modern Authors, respecting the application of the Trepan on the sutures of the scull.*" By M. Louis.

This is an excellent resumé of ancient and modern writers, and one which is exceedingly valuable (if for nothing else,) for the bibliographical literature it contains. Its character prevents us from giving an analysis of it. It closes with the following sensible remarks, which we cannot refrain from copying. "We have seen, in the above account of the opinions of different authors, how inattentively their works are read; their doctrine is often misunderstood, and under their names, errors are transmitted in books subsequently published. The truly respectable authority of the real masters of an art, greatly suffers by these changes. Better servilely copy them, than place in their mouths, by erroneous extracts, opinions they never held. In order to distinguish between the true and false, and to attain correct principles, we must go back to the sources of knowledge, re-discuss matters laid aside, distinguish species, appreciate experience and guard ourselves from being dazzled by success, note the favorable circumstances which have led to it, and combat errors which prejudice sustains and unwillingly abandons."

M. Louis is decidedly in favor of the conclusions and opinions of M. Lossus, as given in the previous paper.

The fifth article is a "*Memoir on Fungous Tumors of the Dura-Mater,*" by M. Louis. The particulars in part of twenty cases of this disease are related in the paper. So closely allied are they in many respects, that the following, which we quote, may be considered a sample of the rest.

A man, aged 35, possessing an excellent constitution, whilst descending some steps, fell heavily and struck upon his buttocks, which received the full force of the blow, he felt stunned for a few moments, the same sensation continuing more or less for four months—eight months after the accident his barber called his attention to a singular sensation accompanied by a crackling

sound, near the top and to the right side of the head. On the following day a small tumor appeared at the point, it caused no pain, but increased rapidly; he consulted several surgeons, some were of the opinion that it was an aneurism, others cerebral hernia. Various means were resorted to for relief, but with no success—pressure produced giddiness. His constitution gradually failed, and he died 22 years after the reception of the injury. M. Louis made the autopsy. The tumor was found to arise from the dura-mater. A complete perforation of the cranium from the pressure of the tumor had taken place—the internal surface of the dura-mater was much thickened, and its vessels had acquired a varicose appearance; the tumor had no attachment to other parts, and in construction was much like that of ordinary sarcoma.

In some of the cases mentioned, two or more tumors were present, which rendered the treatment more complicated, and the danger greater. M. Louis remarks, that "surgical aid can only be rendered with some hopes of success in cases where the tumor is single, circumscribed, and when the nature of the surrounding parts permits of its being attacked over its whole circumference." He believes that the fungus is essentially a disease of the dura-mater, and that the affection of the bone is consecutive; that this latter part is the one to which treatment should be directed, by the immediate removal of the diseased bone that surrounds the tumor. To use his own words, "it is only after we have removed the bony circumference which conceals the whole of the tumor, that we should employ means to destroy sarcomatous vegetations of the dura-mater by the use of a ligature, of aromatic powders, or even of appropriate escharotics, according to the nature of the case." As to the correctness of this line of treatment we leave our readers to judge for themselves; cases are related in the paper favoring the practice.

A short but interesting "*Memoir on Encephalocele, or Hernia of the Brain*," by M. Ferrand, follows this; after which comes a "*Summary of Observations on the Diseases of the Maxillary Sinus*," by M. Bordenave. This article commences with a short anatomical description of the sinus; after which he cautions the surgeon against mistaking a fistulous opening through the socket of the molar tooth discharging mucus for that of abscess, which has frequently been done. Pus contained in this sinus is not uncommon, being produced by inflammation of its lining membrane, or caries of the alveolar sockets. A number of observations are cited in illustration of this fact. When pus is confined with the sinus for a long time, caries of the maxillary bone may result. In cases of simple abscess of the sinus, the extraction of the second molar tooth, and if necessary, perforation through the socket, may be resorted to, after which simple injections may be used if necessary. Diseases of the sinus produced by a specific poison, receives from him a very extended notice. Syphilitic caries of the maxillary bone and sinus is freely discussed. "*A Supplement*" to this article is furnished by M. Louis, in which he endeavors to enforce the doctrine and precepts of Bordenave. There is a "*Continuation of a Memoir on Diseases of the Maxillary Sinus*," by M. Bordenave, following this, occupying 26 pages, and devoted to the consideration of different forms of tumors which occur in this sinus, which from its intrinsic merit we cannot pass by without noticing.

It is well known that the mucous membrane of the maxillary sinus, like that of the nostrils, not unfrequently gives rise to tumors, or fungous excrescences, which baffle the skill of the most able surgeons —insidious in their rise and progress, they frequently become formidable before they are brought to the surgeon's notice. The operations required by the presence of tumors in this part, are among the most creditable in surgery, and not unfrequently call for the most ingenious tact of the surgeon.

In this paper a large number of cases are related; some of a slight, others of an aggravated character. In the former, the course to be pursued, after satisfying ourselves of the presence of the tumor, and without waiting for its farther growth, is "to make an opening into the maxillary sinus, either through its outer wall, or by enlarging any existing opening through the alveoli, proceed at once to extract the polypi, or to excite suppuration in the cavity by the use of digestive remedies, or escharotics of various strengths, or by the application of the actual cautery." When the tumor is single, and the disease is confined to the mucous membrane, this treatment will frequently prove successful. The disease, however, is not always so limited; there are complicated cases in which these fungous tumors seem to generate others; in such cases we can only hope for success by attacking the whole disease directly. By directing our views to this end, our efforts will often be efficacious; and we may sometimes obtain astonishing cures, almost beyond our hopes. Our space will not permit us to quote cases illustrative of the success of the treatment he proposes. But we pass on to section 2d of the memoir, which treats of exostosis of the bones forming the sinus. The frequent elevation or enlargement of the maxillary bone from the presence of tumors in the sinus, renders the diagnosis of exostosis here difficult. M. Bordenave recognises the different forms of exostoses, and after speaking of the specific form requiring the administration of mercury, he says "If the exostoses resist these remedies while the general health of the patient remains good, or if it depend simply on a local disease, we may then attack it with some of the various means of cure with which surgery furnishes us." These are the use of the trepan, the chisel, and saw, and the actual cautery.

Obs. 11th.—A man, aged 33, had for a long time a tumor in the region of the maxillary sinus, which depressed the palatine bones so as to impede the actions of the tongue, whilst in other directions it forced upwards the floor of the orbit, in front it had pushed out the maxillary and molar bones, beyond the level of the nose, whilst behind, it extended to the posterior fauces. M. David laid the anterior coverings of the tumor bare, and sawed off the projecting part, which constituted a portion of a sphere of about three inches in diameter; on removing this he found the tumor to consist internally of a hardish, spongy, white substance, in appearance much like agaric; by various modes of proceeding, M. David succeeded in removing the remaining portions of the tumor—portions of the floor of the orbit of the maxillary, molar, and palatine bones were removed. The actual cautery was applied to portions of the disease that had escaped the cutting instruments. The portions removed left a cavity, the dimensions of which, from before backwards, was four inches and a quarter, and from above downwards, and from right to left, three inches. On the sixtieth day the deformity had so far disappeared that there remained only a small cavity at the anterior part. The patient entirely recovered. The operation was performed on the 27th of June, 1770.

This and the preceding observations, remarks M. Bordenave, furnish examples of true exostosis of the sinus which we ought to distinguish from the various affections which seem to distend the bone, and which may be mistaken for that disease. Periostitis is liable to form, on the surface of the bone, compact growths which may be taken for exostosis. The origin and nature and progress of this disease, along with the smaller amount of resistance in the tumor will serve to distinguish it from exostosis.

Section 3d, treats of wounds of the maxillary sinus with fracture of the bones.

These should be considered as complicated wounds and treated accordingly. They frequently give rise to trouble from the constant flow of mucus through the wound, causing a fistula.

Obs. 13th.—I saw, (says M. Bordenave,) at the Charity Hospital in Paris, a man who had a fistulous tumor in the right cheek, from which protruded the point of a nail, which had been fired from a gun, and passed head foremost into the sinus. M. Foubert divided the tumor down to the maxillary fossa, loosened and extracted the nail. The patient was placed upon the opposite side, which allowed the fluid to flow through the nostril, the part was dressed ; a number of small pieces of bone exfoliated, after which the cure became perfect.

Those who consider the actual cautery the severest remedy in preventing the return (after removal) of tumors in this sinus, will find in their observations, many positive facts to support these opinions. This memoir closes by the narration of an interesting case of fungous tumor of the sinus, by M. Garengeol ; which was eventually cured after repeated extractions by the use of the actual cautery.

Following this is a memoir also by M. Bordenave, "*On certain Exostoses of the Lower Jaw,*" which we pass by in order to have more space for the notice of a "*Memoir on Bronchotomy,* " by M. Louis, and a continuation of the same, "*Which treats of the existence of Foreign Bodies in the Trachea.*" The first of the memoirs is a lengthy resumé of the literature of this operation, in which the opinions of different authors are discussed with great ability. The different instruments used by surgeons, ancient and modern, are fully described, and it closes by some judicious directions calculated to enforce upon the mind of the surgeon the kind of cases in which the operation is justifiable.

The first part of the second memoir is occupied with the detail of several cases where death occurred from suffocation within a few days after the substance passed into the trachea: after which a number of cases are given, where the foreign substance was spontaneously discharged, and the paper closes by the relation of several cases where a successful termination was brought about by the early performance of tracheotomy, and thereby the removal of the foreign body. M. Louis is an advocate for the early performance of the operation, free incisions which will admit, if necessary, the introduction of the finger in order to search for the substance.

"*A case of Perforation of the Trachea by a Foreign Body,*" by M. De La Martinier, claims a passing notice for its singular and unique character.

Case.—The son of a merchant, whilst cracking a whip, was suddenly seized with great difficulty of breathing, followed by extreme danger of suffocation. A surgeon was called and an internal as well as external examination of the throat was made, but nothing that could give rise to it was discovered. M. Martinier saw the patient in convulsions with swelled or turgid face, shortly afterwards, when, upon close inspection, a small red point was observed just below the cricoid cartilage, and deep under it could be felt a small circumscribed tumor. An incision was made down upon it, a small hard point was felt by the finger; it was seized with the forceps and withdrawn. It was found to be a large brass pin, more than fifteen lines in length, which had passed directly through the trachea. The pin was attached to the end of the whip-lash. The patient shortly afterwards recovered.

In cases where symptoms like those which existed in the foregoing case are present in an aggravated degree, remarks M. De La Martinier, "the operation of bronchotomy will remove the immediate effect, namely, impeding suffocation; the life of the patient being thus preserved, we shall have time afforded us to direct the necessary researches for removing the cause by surgical means, or for waiting without fear the efforts of nature."

A "*Summary of Cases of Swelling of the Tongue, and the most effectual means for relieving it*, by M. De La Malle," closes the volume before us. The remedy recommended is free incisions made into the dorsum of the tongue; a therapeutic surgical measure, the originality of which the author claims for his father who resorted to its use as early as 1725, upwards of 70 years, by-the-by, after it had been put in successful practice by the celebrated Dutch Surgeon, Job A. Meekren.

The reader of this analysis should bear in mind that the memoirs which compose this volume, are now for the first time presented to the profession in an English dress; the original having been upwards of fifty years since published to the French profession. In them will be found views which have long since become standard precepts in the practice of surgery; others, the adoption of which has long been a matter of question among surgeons; and others still which are being at the present time brought before the profession as peculiar to the last quarter of a century. The present is an age of eras in medical science; and if we mistake not, in many of the old masters may be found precepts and modes of practice, the adoption of which would add much to the success and efficiency of modern surgery.

BIBLIOGRAPHICAL NOTICES.

ART. IX.—*A Dispensatory, or Commentary on the Pharmacopœias of Great Britain and the United States, comprising the Natural History, Description, Chemistry, Pharmacy, Action, Uses and Doses of the Articles of the Materia Medica.* By ROBERT CHRISTISON, M. D., V. P. R. S. E., President of the Royal College of Physicians of Edinburgh, Prof. of Materia Medica in the University of Edinburgh, &c. Second edition, revised and improved, with a supplement, containing the most important new remedies. With copious additions, and 213 illustrations. By R. EGLESFELD GRIFFITH, M. D., author of "A Medical Botany," &c., &c. Philadelphia: Lea & Blanchard. 1848.

THE first edition of Christison's Dispensatory, has been long before the public, and wherever it has been known has fulfilled all the expectations raised by the standing of its author as an able chemist and a sound and discriminating physician. It is a matter of surprise that it has never before been republished on this side of the Atlantic, and we are glad that Messrs. Lea & Blanchard have so soon availed themselves of the opportunity afforded by a second Edinburgh edition to furnish us with an American reprint of this standard book. The first four pages of the work are occupied by an introductory chapter on some of the processes of pharmacy; a chapter which may be thought to be intended for the apothecary rather than for the physician, but which contains matters with which the physician should be more familiar than he commonly is, influencing as they do, the activity of his remedies. Like every other part of the book, it shows that Dr. Christison is not a mere compiler, but has drawn largely upon his own observation. The following is curious, and worthy of further inquiry.

> There is reason to suspect that the officinal pills are in general too large. Five grain pills often pass through the body apparently but little altered; and it has occurred to me to observe that four colocynth and henbane pills of one grain each will operate as effectually as two five grain pills, and more mildly.

The introduction of Dr. Christison is followed by various extracts from Redwood's late edition of Gray's Supplement to the Pharmacopœia, made by the American editor, on the specific gravities of bodies, and the various instruments by which they are determined, thermometrical equivalents, solubility of salts, &c. The body of the work is taken up with the materia medica; and in it the articles are treated of in an alphabetical order. The style is characterized by directness, clearness, and conciseness. What the author has to say, he says shortly, but there is no mistaking his meaning. The chemical history of the various drugs is given with great fulness, and the various processes of the pharmacopœias submitted to a rigorous criticism. What adds greatly to the value of the work is the fact that for the therapeutical operation of medicines, Dr. C. refers us constantly to his own experience. He is an acute and discriminating

observer, and has had ample opportunities for observation. He speaks then with an authority warranted by his position, and while giving due credit to others, relies on what he himself has seen. Sometimes we believe he is wrong, underrating perhaps, (as in the article on nitrate of potash,) a well-known and valuable remedy, but his opinions are entitled to such weight that every one must be desirous of knowing them.

Besides the articles mentioned in the Edinburgh Pharmacopœia a supplement of the most important new remedies which have come into use since the last edition of that Pharmacopœia, has been added. As might have been expected, Dr. Christison is not one to be carried away by a novelty merely because it is a novelty. He speaks of new remedies with becoming caution, yet is perfectly willing to allow all that can be fairly urged in their favor. The following extracts may be found interesting, containing matter not generally known to the profession.

Gallic acid has lately come into general use as an internal or constitutional astringent. It has been found serviceable in chronic mucous discharges from the bowels or urinary bladder. But its most remarkable effects as an astringent have been manifested in hemorrhages, especially from the kidneys, the uterus and the lungs. I have seen several cases of menorrhagia promptly recover under its use. I have likewise seen hæmaturia repeatedly yield to it. And in two cases of hæmoptysis the hemorrhage rapidly ceased after the third dose of six grains given every hour. Mr. Lyell, of Newburgh, not long ago, turned my attention to its apparent power of arresting the excretion of albumen with the urine in Bright's Disease of the Kidney; and in a few instances it has appeared to me to have this effect.

The usual dose is three grains thrice a-day, in the form of a pill, made with liquorice-root powder and conserve of red-rose. In urgent cases of hæmoptysis I have given 36 grains in twelve hours.

Of cod-liver oil Dr. C. thinks favorably.

This remedy was first used empirically, and no valid explanation of its virtues has been yet given. It is apt to cause sickness at first with some people, and a few are also liable to suffer diarrhœa. But in general it produces neither of these effects. It acts as an alterative, improving the complexion, and tending remarkably to increase the deposition of fat in the cellular tissue. During this change, strumous ulcers and enlargement of the glands, strumous ophthalmia, pseudo-syphilis, as it presents itself in scrofulous constitutions, various chronic cutaneous diseases, and chronic rheumatism frequently disappear; chronic diseases of the joints are also sometimes benefitted; phthisis pulmonalis often undergoes mitigation, and even apparent cures have been reported. Gout, rachitis, caries, and tabes mesenterica, are also said to have yielded to it. Its efficacy in many of these obstinate diseases has been exaggerated by its admirers. But there is no doubt that it is occasionally serviceable, and especially in strumous affections of all sorts. It undergoes digestion; for when two, three, or even four ounces daily, are taken for months continuously, very little increase is observed, by analysis, in the oily ingredients of the excretions.

The usual dose is half an ounce twice a-day, which those who can bear a larger quantity, may increase to twice as much. But it is right to begin with small doses of a teaspoonful only, in order to lessen the risk of nausea and vomiting being produced, by mere prejudice and disgust. Those who have had most experience in its use, find that the best way to administer it, is to give it simply, and afterwards a little sugar and cinnamon powder to remove

the after-taste; three or four drops of oil of anise, cinnamon, peppermint, or lemon, dissolved in an ounce of the oil, also correct the nauseous taste and tendency to cause sickness; but no form of emulsion is any improvement. (*Bennett.*)

Of medicinal naphtha, or as he terms it spiritus pyrolixicus, he says:

Its actions have not yet been carefully investigated; but it seems to be narcotic, sedative, and calmative. It certainly possesses the property of allaying the cough and febrile excitement of phthisis pulmonalis; but general experience has not borne out the sanguine hopes entertained by Dr. Hastings of its efficacy as a remedy in that disease. I can amply confirm all that has been said of it as an anti-emetic remedy in cases of chronic vomiting; for in cases of this affection depending on both functional and organic disease, I have frequently seen the vomiting arrested or greatly mitigated by pyroxylic spirit. Even creasote has appeared to be scarcely so efficacious.

The usual dose is five minims; and it is conveniently given with a drachm of compound tincture of cardamom made into an ounce mixture with water merely.

According to the editor of the Pharmaceutic Journal, the naphtha of Dr. Hastings is not Pyroxylic spirit, but Pyro-acetic spirit, Acetone, or Hydrated Oxide of Mesityl of Kane (C^6H^5O+Aq). But all the so-called Medicinal naphtha of the Edinburgh shops, obtained from London, is Pyroxylic spirit; and this is the substance to which the preceding remarks on the uses of naphtha in diseases must be understood to apply.

The American editor, Dr. Griffith, besides the extracts from Redwood's edition of Gray's Supplement, has added an account of the various processes of the U. S. Pharmacopœia, together with an account of such articles as are recognised by that Pharmacopœia, but are not mentioned by Dr. Christison. His additions seem well and judiciously made; but the chief value of the book to the physician, as we have before intimated, depends upon its affording an exposition of the opinions of Dr. Christison himself. B. W. M'C.

Art. X.—*Medical Lexicon: A Dictionary of Medical Science;* Containing a concise explanation of the various subjects and terms; with the French and other Synonymes; Notices of Climate, and of celebrated Mineral Waters; Formula of various Officinal and Empirical Preparations, &c. By Robley Dunglison, M. D., Professor of the Institutes of Medicine, &c., in Jefferson Medical College, Philadelphia. Seventh edition, carefully revised and greatly enlarged. Philadelphia: Lea & Blanchard. 1848. 8vo. pp. 912.

We have here presented to our notice another (the seventh) edition of Dr. Dunglison's masterpiece of literary labor. We venture the assertion that no work with which he has ever been engaged, has cost him half the pains and labor as this, and on looking over its pages we are fully impressed with the belief "that the author has not suffered his exertions to flag in the preparation of the present edition" which is sufficiently manifested by the fact that he has added "*between six and seven thousand terms* which are not to be found in the previous editions." In order to admit of these additions the

size of the page has not only been increased, but the number of pages is also greater by at least one hundred. The typographical execution does honor to the publishers, and we have no doubt they will find a far more speedy and rapid sale for this enlarged and improved edition than they were wont to find with any of the previous ones. We commend it to the profession as every way adapted to supply the wants of the student and also that of the general practitioner.

ART. XI.—*A Practical Treatise on Poisons; their Symptoms, Antidotes and Modes of Treatment.* By O. H. COSTILL, M.D. Philadelphia: Grigg, Elliot & Co. 1848. 16mo. pp. 160.

WERE man constantly omnivorous in learning there would be no apology for little books. It is true that many a "voluminous author when reduced to his quintescence, would appear in a nut-shell," and such ought to be thus reduced, for it is a wicked expenditure of time, to traverse the round of his wandering thoughts to gather here and there a good idea—it is like searching for diamonds in their native sands, or for gold in its primitive bed—it partakes too much of an original investigation itself, for when a man ultimately finds a truth, he feels almost as though he were himself entitled to it by right of discovery; whereas a book on a scientific subject, and especially on the boundless one of *medicine*, ought to be a succinct narration of important facts and legitimate deductions, so that the mind can grasp them readily and retain them easily. We have ever had a very poor opinion of those "pocket books," "*companions*," "*epitomies*," or "abridgments," which do not contain *all the important things* on the subjects of which they treat. Their tendency is to make the reader superficial, to *abridge* his intellect and curtail his usefulness.

Of the work before us we have but little to say; itself a compend it hardly admits of an analysis. It lays no claim to originality save in design. It aims at practical utility, and this on the subject of which it treats is most praiseworthy. It will serve as a useful guide in cases of emergency in the treatment of poisoning, and as such we can commend it, but it cannot serve even as a semi-remembrancer of what is known on the subject, Toxicology. Indeed this has become so vast and complex in its medical and *juridical* relations as to be fully understood only by those who have made it a specialty.

The practitioner must, however, be acquainted with the symptoms and antidotes of poisons, in order to know how to pursue a proper plan of treatment in cases of emergency where life depends upon the action of the moment. But the juridical questions of poisoning, had better be referred to the practical toxicologist. The latter can consult all the elaborate works on the subject, while the former only will be benefited by a perusal of this brief treatise. We do not hesitate to recommend it as a convenient little store-house of useful knowledge to the general practitioner, who has but little leisure to push his inquiries into the penetralia of the subject. Its adaptation to the general wants of the profession, its convenience, and cheapness, will doubtless secure to it a good sale. D. C. E.

ART. XII.—*The Principles and Practice of Modern Surgery.* By ROBERT DRUITT, Fellow of the Royal College of Surgeons. A new American, from the last and improved London edition. Edited by F. W. Sargent, M. D., author of "Minor Surgery," etc. Illustrated with one hundred and ninety-three wood engravings. Philadelphia: Lea & Blanchard, 1848. 8vo. pp. 576.

THE last English edition, the fourth, of which this is a reprint, appeared in London in the summer of 1847. The work at that time received from the pen of its author, very extensive additions, among which may be noticed the subjects of inflammation, malignant disease, diseases of the bones and joints, aneurism, diseases of the spinal cord, fissured palate, diseased conditions of the urinary apparatus, and very extensive additions to the appendix of formulæ: besides these an entirely new chapter on the art of bandaging, and another on diseases of the ear.

In the preparation of the present American edition, the general arrangement of the author has been adhered to. The annotations of Dr. Flint, of Louisville, Ky., who edited the first edition, have all been retained, except where they were already embodied in the text by the author. Dr. Sargent, the present editor, it appears has, in a great measure, confined himself to adding such of the results of the skill and industry of American Surgeons as appeared to him most worthy of notice. A large number of wood-cuts have also been added, the artistical execution of which are generally good. The work of Dr. Druitt's is an excellent compend of the opinions and practice of the best surgeons of the present day, and reflects great credit upon its author, who, as he himself has stated, wrote it while he was yet a student. It will, we feel assured, still continue to receive the esteem and confidence of the profession.

ART. XIII.—*A System of Human Anatomy, General and Special.* By ERASMUS WILSON, M. D., Lecturer on Anatomy, London. Fourth American, from the last London edition. Edited by PAUL B. GODDARD, M. M., M. D., Professor of Anatomy and Histology, in the Franklin Medical College of Philadelphia. With two hundred and fifty-one illustrations, by Gilbert. Philadelphia: Lea & Blanchard, 1848. 8vo. pp. 576.

IT is scarcely a year since we called the attention of the profession to the third edition of this valuable work, and now, through the politeness of Messrs. Lea & Blanchard, we have presented to our notice this, the fourth edition. Surely, the profession are not, at least in this instance, backward in appreciating, in a proper manner, a work which demands the confidence and supplies the wants of students in medicine.

The present is a reprint, with additions from the fourth London edition, and in preparing that for the press, Dr. Wilson "has availed himself of the discoveries in anatomy, which have been made public since the appearance of the preceding one." The excellent reports of Dr. Paget, on the chief results obtained by the use of the Micro-

scope in the study of anatomy and physiology, have been freely consulted. The editor in revising it for the American press, "has added some new matter and a large number of plates; among others an important series on the nerves. He has also re-written his introductory chapter on histology. The illustrations which accompany the portions of the work devoted to general anatomy, it appears, were drawn from the microscope with the camera lucida; by so doing, absolute correctness is secured. We hardly need add, that the work possesses additional claims upon the profession and especially upon students. The typographical execution of this edition is good.

ART. XIV.—*An Analytical Compendium of the Various Branches of Medical Science, for the Use and Examination of Students.* By JOHN NEILL, M. D., Demonstrator of Anatomy in the University of Pennsylvania, Lecturer on Anatomy in the Medical Institution of Philadelphia, etc., and FRANCIS GURNEY SMITH, M. D., Lecturer on Physiology in the Philadelphia Association for Medical Instruction, Fellow of the College of Physicians, etc. Philadelphia: Lea & Blanchard. 1848. 12mo. pp. 908.

THIS work consists of a series of "hand books," or manuals on the different branches of medical science, viz.: anatomy, physiology, surgery, obstetrics, materia medica, and therapeutics, chemistry and the practice of medicine. The authors of it lay no claim to originality. "As an analytical compendium, its highest claim is to be considered a faithful digest of recorded facts and opinions. We ask for it nothing more; and to obtain this, we have freely used the standard text-books of the day, gleaning from them whatever seemed useful to our purpose, even in some instances to the use of language as well as ideas. And to them we own our indebtedness."

However much we may desire an increase of facilities for the prosecution of medical studies in this age of improvements, we question the utility of "manuals to assist the student in the prosecution of his labors" "The great progress of the medical sciences, and the increasing number and size of the standard text-books in the various departments of medicine and surgery," instead of "creating a necessity for compends or manuals," demand (if this increase be founded on the progressive improvements of medical science) a comparative increase in the length of the term of study. If the constant, labored, and we had almost said over-taxed condition of the medical press for the last quarter of a century, be a safe index of the increase of medical truths, facts, and discoveries, then certainly there exists a greater necessity for increase of time, diligence and industry on the part of the novice of the healing art. The old adage that "all is not gold that glitters," may with propriety be applied to many medical books thrown off from the steam-press of the present times. It ought not to be inferred from the fact that there is a constant multiplicity of books, that they of necessity do contain new principles and facts; or that they are demanded by the wants of the profession: for not unfrequently a passing perusal will shortly

determine the fact that they possess but little claim upon our attention.

It is not pretended by the authors of the work before us that all the information necessary to the student or practitioner, is embodied in the limited space of its pages; but only so much of the elements of medical science as are compatible with its character as an analysis. Neither is it "offered as a substitute for the ordinary text-books, or to lessen the necessity of regular attendance on lectures, or close-office study." With these provisions before us, and kept constantly in view, we hesitate not to recommend the compendium of Drs. Neill and Smith to the attention of the profession. As a concise but necessarily limited digest of medical and surgical science, it will materially assist the student and practitioner in refreshing his knowledge on points previously acquired but upon which they may have become in a measure, rusty—for this purpose, it is admirably adapted, and we believe will not only prove acceptable to the student of medicine, but also to the profession at large.

ART. XV.—*The Ohio Medical and Surgical Journal.* Edited by JOHN BUTTERFIELD, M. D., Professor of the Practice of Medicine in the Starling Medical College. Vol. 1st, No. 1, for September, 1848. Columbus: J. H. Riley & Co. 1848. 8vo. pp 106.

IN our last number, we announced the receipt of a prospectus of a new journal to be published at Columbus, Ohio. The first number of the proposed journal is now lying before us; its pages are filled with choice and valuable matter. Five articles compose its original department. The first is one on lithotomy in the female, by Prof. Howard, of Starling College. The second is a short account of epidemic measles, as they appear in Willoughby, Lake Co., Ohio, by F. C. Gibbs, M. D. The third is a very interesting case of inflammation and sloughing of the rectum, by Prof. J. P. Judkins, of Starling College. The fourth is a detailed account of a case of strangulated hernia, which terminated in sloughing of the intestines, and the formation of an artificial anus, by Richard P. Catley, M. D. And the fifth a very lengthy and valuable paper on inflammation and its sequelæ, engorgement, ulceration, and induration of the os and cervix uteri in the unmarried, by F. E. Massey, M. D. The selections of American and foreign intelligence are good; and the editorial department is filled with interesting and pleasing matter, which, to say the least, shows that its editor is well adapted to the responsible position whereunto he has been called. Long may he be spared to add honor to the editorial corps.

ART. XVI.—*A Dictionary of Practical Medicine;* Comprising General Pathology, Nature and Treatment of Diseases, Morbid Structures, &c. By JAMES COPLAND, M. D., F. R. S. Edited, with Additions, by CHARLES A. LEE, M. D. New-York: Harper & Brothers. 1848. 8vo. pp. 144.

THIS number contains the completion of the article on poisons,

which, by the way, is one of the most condensed and yet practical monographs on this subject extant. A very interesting article on pollution, its etiology, pathology and treatment. A short but practical article on the disorders incidental to pregnancy. And a short article on the diseases of the prostate gland. This number is necessarily more complete than any of the previous ones, from the fact that the author himself has, owing to its recent appearance, been able to bring it up to the present advanced state of medical science, which fact has rendered the labors of the American editor less arduous. We should, however, have been much pleased to see the American medical bibliography of the present number as complete as it has heretofore been; an addition to the previous numbers which has much increased its value as a work of reference to the American reader.

ART. XVII.—*The Principles and Practice of Medicine.* In a Series of Essays. By JOHN W. HOOD, M. D. Philadelphia: Thomas, Cowperthwaite & Co. 1848. 8vo. pp. 263.

WE have here presented for the consideration of the profession (and public?) the principles and practice of medicine, condensed into the compass of 263 small octavo pages, large type and double leads. Verily this is an age of improvements! "An age in which science and the arts (perhaps quackery?) is marching onward with gigantic strides." The following is a summary of the contents of the work of Dr. Hood: "*Anatomical Arrangement and Configuration of the Body*," "*Chronic Diseases of the Viscera of the Abdomen*," "*Strumous Habit*," "*Fever*," "*Displacement of the Womb*," "*Asiatic Cholera*," "MECHANICAL AGENTS," "*Reducible Hernia*," "*Hemorrhoids, or Piles*," "*Gout*," "*The Tongue*," "*Appendix*." The author in publishing the volume wishes it understood that his "object is not for the purpose of adding to the list of authors, but from a conviction that some of the causes of our maladies have been overlooked, or have not received the attention which their importance demands; and that several well-known remedial agents have fallen into disuse, notwithstanding their value, and the rank they deserve in the catalogue of remedies." On the present occasion, however much we might feel inclined so to do, we have not time, neither will our space permit of an analysis, or even a notice of some of the singular and unique opinions of the author. Suffice it to say, that judging from the examination we have given the work, the principal object of the author in its publication, is the speedy introduction into public favor, of several (patented?) instruments, the adaptation and use of which, he fully describes in this work under the head of "*Mechanical Agents*."

ART. XVIII.—*Ancient Monuments of the Mississippi Valley.* By E. G. SQUIER, A. M., and E. H. DAVIS, M. D. Published for the Authors. New-York: Bartlett & Welford. Cincinnati: J. A. & U. P. James. 1848. 4to. pp. 306.

THIS work, which constitutes the first volume of the "Smithsonian Contributions to Knowledge," a short editorial notice of which we gave in the July number of the Journal, has been politely forwarded us by the authors. By the advertisement, we learn that "this is intended to form the first of a series of volumes consisting of original memoirs on different branches of knowledge, published at the expense and under the direction of the Smithsonian Institution. The publication of this series forms part of a general plan adopted for carrying into effect the benevolent intentions of James Smithson, Esq., of England.

In the work before us, is collected and presented to the world a vast accumulation of facts relating to American Archæology, all of which are interesting to the scientific public, and some of which are exceedingly so to the medical man, and particularly so to the scientific physician. The chapter on "*Crania from the Mounds*," we have read with pleasure and profit. From it we learn that the human remains found in the mounds are of different eras. Those that are superficial are to be ascribed to the Indian tribes found in occupation of the country at the period of its discovery, in the fifteenth century; they are seldom deposited more than three or four feet below the surface, and are generally perfect—not so with those of the real mound builders; they are found at the base of the mounds, and in such a state of decay as to render all attempts to restore the scull, or any part of the skeleton, hopeless. The crania, when not so much decomposed as to crumble to powder beneath the touch, are crushed and flattened by the falling in of the sepulchral chamber, and by the weight of the superincumbent earth. "The authors have opened a great number of mounds, penetrated to their inmost parts, torn out their contents, subjected them to the most patient and laborious examination." (*Hall.*) And notwithstanding all the labor and toil they have undergone, have only been able to obtain one scull incontestably belonging to an individual of that race." It was taken from a mound in the Scioto Valley; and according to Dr. Morton, is characteristic of the American race. We regret that our space will not allow at present of a more extended notice of this valuable work. It has cost the authors a great sacrifice of time and labor, but in making it, they have raised an enduring monument to their memories, which must last so long as science is cultivated. We earnestly recommend this "great work" to the favorable attention of the scientific public, feeling assured that such of the members of our own profession (and there are many such) as have an interest in the advancement of ethnological research, will here find a rare treasury of new information, upon which their minds and imaginations may feast for a long time to come.

PART THIRD.

EDITORIAL

AND

AMERICAN MEDICAL RETROSPECT.

British Provincial Medical and Surgical Association.—By the Provincial Medical and Surgical Journal, for August 23d, we learn that the sixteenth anniversary meeting of this Association was held at Bath, on the 16th and 17th of August, 1848. On the organization of the meeting, the President, Dr. Heygate, resigned the chair to George Norman, Esq., the nominee in place of the president elect, deceased, for the coming year. In the course of his opening address, which had much to do with the Bath mineral waters, Mr. Norman stated, that "in the first anniversary report, in 1839 (?) it is stated that 313 was the number of its members. Since that time each year has added to their numbers, and we now report 1795 to be the present amount of members." The report to the Council contains the following, among many other particulars: The receipts of the Society for the past year was £1436 19s. 5½d. The volume of transactions for the present year has not yet been published. The question of Medical Reform is still unsettled—present prospects bid fair for the speedy passage and adoption of the proposed charter of the Royal College of Physicians of England. The prize of £50 for the best essay on the "Cerebral Affections of Infancy," was awarded to Dr. Duke, of Dublin. Dr. Hastings announced the presence of Prof. Wood, one of the members of the deputation from the American Medical Association; immediately after, Dr. Wood was unanimously elected an "Honorary Corresponding Member." In reply to the honor conferred upon him, Dr. Wood briefly alluded to his position there on the occasion; and in doing so added but another to the many evidences already evinced of his masterly talent and ability. At a subsequent meeting of the Association the following resolution was offered by Dr. Hastings, and seconded by Dr. Wallis, and unanimously passed: "*Resolved*, That this Association duly appreciate the value of the communication made by Dr. Wood, and fully agreeing with the sentiments entertained by the American Association, request Dr. Wood to convey to them the thanks of this Association." Dr. W. Davies, of Bath, read the "Address in Medicine," which embraced an admirable account of "Maculated Fever, its diagnostic characters, and the relations of sanitary measures to this and other forms of fever." Dr C. W. Bell, of Manchester, was appointed to deliver the Address in Medicine in 1849. Several very interesting papers were read, and cases related, in the course of the session. At the dinner which took place in the evening, after

the close of the meeting, among the numerous toasts given, was one by W. Miles, Esq., M. P., viz., "The health of Dr. Wood of America." This called forth from Prof. Wood the following able and beautiful reply:

Dr. Wood returned thanks. He said, "Mr. Chairman and Gentlemen: It is with emotions that, I fear, may prevent the expression of all I feel on this occasion, that I rise to thank the present company for the honor they have done me, and more especially for the honor they have done my country through me. (*Cheers.*) Science, Sir, is universal—it is born of the necessities of our nature, and its objects are to promote the good of mankind; and therefore, its cultivators in every clime ought to be brethren. (*Hear, hear.*) If it be true of the great system of science, that by strong attraction, all parts are kept together, it is still more so in its inferior or subordinate relations. Like the planets of the solar system, though constituting a great mass of the stupendous whole, there is a closer affinity to each other than to other parts; so we, as scientific men, have a connexion, but as medical men, we are bound together by a yet stronger link. We, of America, have the same origin with you, which binds us by a yet closer tie. We have the same climate, the same literature, for we draw all our knowledge, (our scientific knowledge I mean,) from almost the same sources; and therefore, how important it is that we should cultivate the spirit of brotherhood. (*Hear, hear.*) Standing here as the representative of the profession in America, I may say also, as the representative of the intelligence of America, in relation to this country, for I believe, I may add, that in our land among the well informed, there is a universal prevalence of this feeling towards the mother country. I say, Sir, that we are extremely anxious to cultivate this reciprocal spirit, from those in the highest ranks of knowledge to the lowest grades of society. (*Cheers.*) We have, gentlemen, the fairest race on the earth. We have also the impulse of the Welsh or Celts, the steadiness of the Saxon or German character, and the energy of the Norman race; and we shall go on, unless interrupted by ambition, until all parts of the earth are impregnated with the Saxon knowledge and the Saxon religion, and to such an end I am bound to wish a speedy consummation. (*Cheers.*)"

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Editorial Changes.—Our space will only admit of a brief allusion to the changes, which have recently taken place in the editorial management of some of the Medical Journals of the United States. They are as follows: Drs. Carpenter and Fenner have retired from the editorial corps of the New-Orleans Medical and Surgical Journal, leaving Drs. Harrison and Hester the remaining Editors. Dr. W. C. Roberts has retired from the editorial management of the Annalist, and Dr. N. S. Davis succeeds him. The Missouri Medical and Surgical Journal has been merged into the St. Louis Medical and Surgical Journal, and Drs. Moore and McDowell, the editors of the former, have been transferred to the editorial corps of the latter.

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Professorial Changes and New Appointments.—Prof. F. H. Hamilton has resigned his appointment as Professor of Surgery in the Geneva Medical College. James Bryan, M. D., of Philadelphia, has been appointed to fill his place. Prof. H. M. Bullit has resigned his appointment as Professor of Physiology and Medical Jurisprudence in the Medical Department of the St. Louis University, and R. S. Holmes has been appointed to succeed him. W. M. M'Pheeters, M. D., one of the editors of the St. Louis Medical and Surgical Journal, has been appointed Professor of Clinical Medicine and Pathological Anatomy in the same institution.

Beck's Elements of Medical Jurisprudence.—Since the publication of our last number, which contained a paragraph taken from the Albany Journal, relating to the resignation of Prof. T. R. Beck, &c., we have learned that the labor of the authors in preparing a new edition of this valuable work are far advanced, Prof. J. B. Beck having at the present time very nearly completed the revision and extension of his portion of the work. The publication of it may be anticipated the coming spring.

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A New Remedy in Acute Dysentery.

Marine Hospital, Staten Island, October 5th, 1848.

To the Editor of the New-York Journal of Medicine.

My Dear Sir:—With the hope that the introduction of a new remedy, in the *treatment of acute dysentery*, may alleviate much of the protracted and almost insupportable suffering usually attendant upon this disease, I would beg leave to inform you, that since the middle of September last, I have made a free use of the pulvis gum. guaiaci in all the cases of this malady which have come under my care, and without the slightest desire to change it for any other remedy. At first, I gave it in doses of ten grains, three times daily, mixed with some mucilaginous liquid; but afterwards, the following formula:

℞—Pulv. guaiaci, (this ought to be very fine, much finer than I could obtain it,) ℥v.
Mucilag. gum. acaciæ. Syrupi simp. aa ℥iij.
Aqua puræ, ℥viij. Misce.

Of this mixture, one wine-glassful (℥ij.) was directed to be given three times a day, or every six hours. It is well to observe, that the gum resin is not dissolved in the menstruum, but must be held in suspension by shaking the vial, and thus administered in substance.

The diet in the mean time has been amylaceous and mucilaginous. In the eleven cases in which I have employed this remedy, and I have used it in every stage of acute dysentery, the only occasional adjuvants were Dover's powder, 10 or 12 grs., with 5 grs. of calomel at night, when it was apprehended that, otherwise, the nights would be extremely distressing, and sometimes a blister over the abdomen; but in the majority of the cases, calomel, opium, ipecacuanha, castor oil, and every other popular remedy were entirely abandoned.

It was seldom necessary to administer more than twice the quantity of guaiacum specified in the above formula, for in four or five days, the disease was generally conquered, and then for allaying those irregular pains, which are necessarily consequent to the irritable or atonic state, in which the muscular fibres of the intestines are generally left after acute dysentery, resort was made to soothing remedies, such as pulvis g. tragacanth, in doses of 5 grains, frequently repeated, or mucilage of gum Arabic with syrup in 8 oz of which, about 2 grs. of the sulphate of morphia were held in solution.

I think guaiacum a remedy well worthy to be put to a fuller test by practitioners in the treatment of acute dysentery. I claim no originality as a dis-

coverer on this occasion. I was induced to employ it in consequence of reading in one of the numbers of the Lond. Med. Gazette, its admirable effects in the hands of Mr. Bell, in cynanche tonsillaris; being thereby naturally led to infer that a material well adapted to repair a breach in one end of a canal, would, all other circumstances being similar, prove equally serviceable in patching up the other.

I am, very respectfully yours,

JOHN W. STERLING, M. D.

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CASE OF LABOR WITH TWINS, *Interesting from its Novelty.* By David M. Sayre, M. D.—Communicated in a letter to L. A. Sayre, M. D., of this city, and by him forwarded to this journal for publication.—ED. *N. Y. Jour. of Med.*

Sparta, (N. J.) Sept. 11th, 1848.

DEAR DOCTOR,—Enclosed I send you the statement of an obstetrical case that fell to my lot a few days since, valuable, perhaps, more from its novelty, than anything else. It was new to myself, certainly, though engaged in the active duties of the profession for the last 20 years, and doubtless is of rare occurrence. Denman, Rigby, Gooch and Blundell make no reference to it. Dewees mentions two cases as occurring in the practice of others and attended with great difficulty in the delivery. The difficulty in my case was slight, from the fact of their being *premature*. Upon the discovery of their position, I congratulated myself, that they *were premature*, nor should much covet a like case of the *full time*. I made no measurement nor obtained the weight of either at the time, but the perfection of the form and the size of each induced me to consider them as rather eight than seven months. You can make what disposition of it you see fit.

Yours, truly,

To LEWIS A. SAYRE, M. D. DAVID M. SAYRE, M. D.

Case.—I was called Sept. 4th, 3 P. M., to see Mrs. D——, in labor; "she supposed herself to be seven months gone in her first pregnancy." Labor set in the evening previous after a hard day's work. The pains were strong, regular, and frequent, the os uteri nearly dilated; the membranes distended and protruding, and the feet presenting. No circumstance calling for interference, the position of the child favorable, viz. its back to the belly of the mother, the labor was suffered to proceed unaided. An hour was occupied in the delivery of the child to the neck, when its further progress was temporarily arrested. Examining for the cause of the delay, I found the head of a second child in advance of the first, low down in the pelvis, distending the perinæum on the right, and on the left in contact with and in the hollow or vacuity between the chin and sternum of the first. A short period was occupied in dilating the os externum, and both were delivered with their relative positions unaltered. The child first presenting died in the birth from compression of the cord, the second was delivered alive enveloped in its membranes unbroken. The placenta soon followed; there was slight laceration of the perinæum; both children were large for seven months. The woman was above the ordinary stature and the pelvis large and capacious.

I may here remark, that in my first examination I felt a fœtal head resting on the edge of the *brim* opposite the right acetabulum, which was doubtless the head of the second child, and that the membrane of the first did not rupture until it protruded externally.

PATHOLOGY AND PRACTICAL MEDICINE.

Death following Vaccination.—Dr. Greig, in the *North Western Medical and Surgical Journal*, reports having been called to attend a patient aged 18 years, who seven days before had been vaccinated on the arm. At the period of his visit erysipelatous inflammation extending from the axilla to the elbow existed; there was also present "a gangrenous patch two inches square (the centre of which was the vaccine puncture,) midway the arm on the outer side, and one twice that size on the under side. Pulse 120, a little resistance on pressure, tongue moist, slightly furred, and of a bluish shade; delirious, manner hurried, collapsed expression of the countenance, picking at the bed clothes, &c." He made use of yest and charcoal to the part, gave port wine, porter, and small portions of nitric acid; the patient died the following night. The editor of the *Ohio Medical and Surgical Journal* reports two cases which he saw in 1845. The main facts are these: twenty-four hours before, the mother of two healthy children, one five and the other seven years old, inserted into their arms some matter from a vaccine pustule with the point of a darning needle. The child from which the matter was taken was perfectly healthy, the mother of the children only noticed that it was thick and yellow. In a few hours both children became sick, nervous and prostrated; convulsions set in and one of the children died twenty-four hours after the operation, the other after some time recovered. At the points where the virus was inserted, in the arms of both children, were dry and angry-looking ulcers about two lines in diameter, without areola and apparently extending through the true skin.

These are exceedingly interesting cases—cases which would in no small degree harass the young practitioner, if not led to a serious though unjust drawback upon his professional reputation. We cannot at present point to a single case like the foregoing on record.

On the Treatment of Poisoning by the Bite of a Rattlesnake.—The September number of the *Buffalo Medical Journal* contains an article by Dr. Trowbridge in which he adduces strong testimony in favor of the use of sweet oil in cases of poisoning from the bite of a rattlesnake. The oil is to be used internally and externally, internally in doses of ℥ ij. every half hour, and externally to the part by constant friction. Dr. T. does not claim any originality in the use of the article, on the contrary he cites several successful cases from old journals to show that it has been used with success. Prof. Williams has recently, in the Boston Medical and Surgical Journal, given his testimony in its favor, mentioning at the same time the successful use of the oil by his

grandfather, Dr. Thos. Williams. Dr. Trowbridge, in closing his paper, says that the testimony adduced furnishes sufficient evidence to warrant its use, and a reasonable reliance upon its power as an antidote to the poison.

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Diabetes Mellitus. By *Prof. Flint.* (*Buffalo Med. Jour.*)—The presence of sugar in other secretions than the urinary secretion, and in the blood, which late researches have abundantly demonstrated, render it inappropriate longer to rank diabetes among renal diseases. It is a disease affecting the assimilatory processes, in consequence of which sugar ingested passes unchanged into the blood-vessels, and alimentary principles capable of being converted into sugar undergo that chemical change. The kidneys are involved only as one of the excretory outlets by which this useless saccharine material is eliminated from the system. The hyper-secretory action of the kidneys, (which is probably due to the presence of the sugar acting as an excitant,) constitutes an important element of the disease. This will serve to explain, in part, the dryness of the surface, the costiveness, the thirst, etc. The loss of those alimentary principles which contain sugar, or are capable of conversion into sugar, for all purposes of healthy assimilation, will explain the debility, the wasting, and the great gravity of the disease. We have thus advanced a considerable way in our knowledge of this disease; but we are still at a distance from a knowledge of the nature of the perversion which the processes of assimilation undergo, and of the ulterior morbid condition upon which this perversion depends. In other words, its true pathology, and as a matter of course, its ætiology are still unknown. The knowledge, however, which has been acquired is not without practical value. It prevents, in the first place, treatment based upon the idea of its being essentially an urinary disorder, and other false pathological views, and in this way saves the patient from measures which might prove not only useless, but injurious. This, although negative, is, nevertheless, not the least important of the advantages which attend improved knowledge of diseases generally. But it leads to a positive advantage in teaching the propriety of withholding, in as far as practicable, aliment of a saccharine nature, and aliment capable of being readily converted into sugar. In this way the quantity of sugar in the urine is almost sure to be considerably diminished, and, as a consequence, the amount of urine is lessened. Although the measure is but palliative, it is vastly important, inasmuch as, in itself, it serves to prolong the life of the patient, and gives time for the employment of means by which it may be hoped a cure will be effected. With reference to the latter, science gives but little precise information, and experience not much encouragement. Our rational course, in the present state of knowledge, is to endeavor to restore the proper action of all the functions, and especially, to modify and improve the processes of assimilation. For this end, tonic remedies, nutricious diet, and hygienic regulations of every description, are essential.

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Acute Glossitis in an Infant—*Suppuration—Recovery.*—By J. A. Long, M. D. (*Southern Medical and Surgical Journal.*)—The child, aged nine months, had just recovered from scarlatina, and at the time of the attack was laboring under aphtha. When seen by Dr. Long, the tongue was enormously swollen, so much so as to fill the entire cavity of the mouth, and protruded to a considerable distance out of it, in a lateral direction. The following symptoms were present in the case, viz.: high fever; countenance flushed; pulse quick, small and much accelerated (164); respiration very difficult; a large quantity of viscid saliva adhering to the tongue which was hard to the touch, and the swelling confined principally to the left side. The child had

not nursed for thirty-six hours. A free incision was made into the tongue when, to the surprise of the operator, about 1½ ounces of pure pus was discharged, followed by almost immediate relief. Five hours after the child nursed freely—recovery, after a little time, was complete.

Hereditary Syphilis in Infants. *By Dr. H. D. Bulkley.*—(*Clinical Lecture in Annalist.*) This form of syphilis is one of much interest in several respects; but I will only remark concerning it in the present case, that it is never primary in the infant, but always the sequel of a neglected or imperfectly-treated previous form, which is most commonly the scaly, but may be the papular or the pustular, and hence always affords unequivocal proof that the constitution is laboring under the infection. And here I would remark, that so far as my observation extends, every ulceration about the anus of a child under a year old, or about that age, should be regarded with suspicion. I will not say that they are necessarily venereal, but I have rarely, if ever, seen one that was not so, and never, in one instance that I can now recall, saw a case of flat tubercle or condylomata in this situation, at this age, (and indeed, I may say, at any other,) that was not syphilitic. I do not mean, of course, to include the excoriations and superficial ulcerations sometimes seen to follow neglect of cleanliness of these parts, but only elevations and ulcers which have continued any length of time, and can be traced to no definite cause. A striking case occurred in my practice recently, for the origin of which I can account in no other way. I was requested to see a child just a year old, represented by its mother as suffering from costiveness and pain on having a stool. Supposing it to be a case of the ordinary kind, I prescribed some simple laxative medicine. This, however, afforded no relief; and the mother then remarked that the child had a "pimple" which she wished me to examine, which she first noticed about three weeks before, and which had been gradually increasing. I found near the orifice of the anus, and on a line with the raphe, a small crest-shaped elevation, about three lines in length and two in breadth, of a pink color; and extending from the base of this, within the orifice of the anus, an ulcer, nearly circular, about four lines in diameter, with well defined, elevated, and slightly indurated edges, surface slightly yellow. The general health of the child was apparently good, though its complexion was somewhat brownish. There was no disease to be seen elsewhere, except a few enlarged sebaceous follicles on the face. It was ordered two grain doses of hydrarg. c. creta, night and morning, with tea-spoonful doses of castor-oil, if the bowels were not moved without it, and a little stramonium ointment to be applied to the sore. At the end of fourteen days, the ulcer had nearly healed, the condyloma was much smaller, the complexion of the child was much very improved, and the bowels were quite regular, with little or no pain at stool. The father denied ever having had any other form of venereal disease than a slight gonorrhœa a few years before, and had never suffered from any secondary symptoms, and there was not the least evidence of infection on the side of the mother.

As to the source of infection in the case now before you, the mother has never had the least secondary symptom, and there is every reason to believe that she has no share in it. The father positively denies that he ever had syphilis in any form, and never had any eruption nor sore throat; but he has one symptom which may be regarded as almost decisive on this point. He has complained for months past of a severe pain in the head, coming on every afternoon about three or four o'clock, and lasting until about the same hour next morning, for which he says that he has tried a variety of means without relief. This one symptom leads me to fix upon him as the source of the infection, and I shall test my diagnosis by the effect of mercury, and will communicate the result at some future time. This pain does not always exist in constitutional syphilis, but when a pain of this character, commencing at this hour, does exist, and resists other treatment, I should regard it as an important element in

the diagnosis, and have often been much assisted by it. I shall treat the disease in the infant with hydrarg. c. creta, in doses of two grains, night and morning, and abstain intentionally from any local application, to show the effect of constitutional treatment alone, and will exhibit the case to you while in progress.

SURGERY.

QUACK SURGERY. *Scirrhous Tumour of the Mammary Gland—caustic Application—Death.* By D. Meeker, M. D., (*Ohio Med. and Surg. Jour.*)—The patient, aged 30, noticed for the first time, three years since, a tumour of the right mammary gland. It soon became painful, and rapidly increased in size; pains were lancinating and extended into the axilla and down the arm. At the time the part was first examined by Dr. M., the tumour was hard, ragged, very tender to the touch, skin corrugated and discolored, and approaching towards ulceration, its removal was advised, the patient dissented and sought relief from a "cancer doctor." A blister was first applied over the whole surface of the tumour—the cuticle was removed and a plaster, (which was afterwards acknowledged by the quack himself, to be composed of a large quantity of corrosive sublimate,) was applied, with directions to keep it on for twelve hours. The pain and burning which it produced, was described by the patient herself, as being as severe as the actual cautery, two hours after its application, the patient complained of a metallic taste in the mouth: she had nausea, griping pains in the stomach and bowels, soon attended with vomiting and violent spasmodic action of the whole muscular system. She remained in this condition for eleven hours, when the plaster was removed and a dose of laudanum given, and a regular physician sent for, who saw her 18 hours after the plaster was applied, and found her in the following condition; pulse 126, violent convulsions, constriction of the muscles of the pharynx, burning sensation in the œsophagus, nausea and vomiting, cold extremities, cold perspiration and great exhaustion. Remedial measures were resorted to with no relief, and Dr. M., saw her in consultation four days after the blister and plaster were applied. She then had hiccough, tender and tympanitic abdomen, vomiting, gums ulcerated and spongy, mercurial fetor of the breath, submaxillay glands enlarged and tender, and the surface of the body covered with mercurial erythema. The surface of the tumor presented a dark colored slough, which had not extended very deep into its substance. Prompt and energetic means were resorted to for the purpose of allaying the irritation and inflammation of the stomach and bowels, but all to no purpose; the patient died on the seventh day after the plaster was applied. [The rapid absorption of corrosive sublimate by the absorbents of the blistered surface in this case, is but another instance that may be added to the many already on record, proving that the absorbents have much to do with the phenomena, evinced by, and the philosophy of remedial agents.—ED. *N. Y. Jour. Med.*]

CHLOROFORM IN SURGICAL PRACTICE. By Prof. Mussey, (*Boston Med. and Surg. Jour.*)—We have performed *fifty-nine* operations on patients under its

influence, and there has not been a single instance in which it has left unpleasant effects. "We prefer it to ether, on account of the smallness of the quantity required, the greater certainty of its making the requisite impression, the greater expeditiousness of its operation, the less irritation it gives to the glottis, its inferior liability to agitate the voluntary muscles, and the more speedy evanescence of its influence after the patient has ceased to inhale it." In two instances, the operation of lithotomy was performed on the young subject; one a boy of 8 years, the other a boy of 12, the operation and recovery were both satisfactory. A clergyman laboring under extensive ulceration of the knee-joint; he was excessively sensitive and much reduced by the disease, he entertained the deepest horror of the operation; he was put under the influence of chloroform and the limb removed, when he awoke, he gave thanks to God for having bestowed a boon of such priceless value upon the family of man. When administered to patients in the horizontal position, with an empty stomach, and introduced gradually into the lungs, the safety of this agent need not be questioned(?). There is a dose of arsenic or opium that can kill, and at the same time another dose that is entirely safe; it is so, we believe, with chloroform; and we cannot help regarding it one of the most important gifts for the relief of human suffering that a kind Providence has sent in this or any other age.

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Observations on Keloide. By T. L. Ogier, M. D.—(*Charleston Med. Jour.*)—From the above cases, and many others of a similar nature, keloide would seem to be of local origin; to be a disease confined entirely to the skin, but there is one peculiarity in this affection which is allowed to exist by all surgeons, viz.: The certainty of the disease being reproduced in the cicatrix whenever the tumor is extirpated. If it was superficial and confined to the skin alone, this would certainly not be the case; it is not so with any other tumor; and yet it cannot be a disease of the general system, for beside that the general health of the patient during the existence of keloide, is good, we find that after extirpation, these tumors return in the *cicatrix* of the *wound* made by the *operation*—it shows no disposition to return in any other part of the body, like cancer. After an operation for cancer, the disease may be entirely eradicated from a certain point, but will afterwards appear in some other organ, remote from the original seat of the disease; but in keloide, if the disease be not reproduced in the original location, it will not be any where else. What the cause of this difference is seems very difficult to determine, and I do not attempt to offer any satisfactory explanation of it; but the following has occurred to me as the most rational way of accounting for the reappearance of this disease after extirpation.

Keloide appears to be at first a fibrous growth from the skin, projecting slightly from its surface as a hard round or oval tumor. After a time this degeneration takes place internally along the capillary vessels, and finally along the small arteries which furnish blood to the skin. When we extirpate a keloide tumor then, and think we have taken out every portion of the disease, we leave these affected arteries, the wound is closed, and union takes place between its lips, but the blood and lymph which carry on this healing process come from these diseased arteries; and these vessels themselves throw out branches in the newly-formed tissues, and carrying the disease there, the new cicatrix is again thus covered with a keloide tumor.

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Case of a Large Tumour involving the Superior Maxillary Bone.—*Operation by Prof. Pancoast.* Reported by J. V. Patterson, M. D. (*Medical*

Examiner.)—Rachel Flora, aged 18, a strong, healthy colored girl, residing in Bucks Co., Pa., had suffered from the presence of an epulis tumor of the upper jaw for the last ten years.

When she was two or three years old, and then living in Virginia, she had a tumor of the same description removed from her upper jaw by a physician of that State; but after an interval of three or four years it returned again, and has been gradually increasing, until it has attained its present size. The tumor as it now appears, extends from the anterior part of the superior maxillary bones, across the mouth, as far back as the epiglottis, being attached in front to the alveoli of the incisor teeth, and behind to the palatine processes of the superior maxillary, filling up the cavity of the mouth, and materially interfering with respiration and deglutition, so that for the last few months the patient has been nourished entirely by liquids. In its character the tumor evidently belongs to that class of tumors known under the name of erectile, vascular in its nature, swelling up and pulsating forcibly under the least excitement of the circulation, so as to threaten the patient with suffocation. Only a few days after her arrival in this city, she had an attack of hysteria, during the paroxysm of which, the tumor swelled up to such an extent, as to endanger her life by suffocation, and to demand the free use of the lancet.

As the removal of such a vascular mass would necessarily give rise to a vast amount of hemorrhage, it was deemed expedient and requisite to tie the primitive carotid artery of that side; for the ligation of the external carotid alone would not suffice, as there existed such a free anastomosis between the vessels of the external and internal carotids, secondary hemorrhage would be likely to take place, which might prove fatal. Accordingly, on the 6th of November, Prof. Pancoast, in the presence of the class, performed the operation for ligation of the primitive carotid on the left side, after the usual manner, and succeeded in passing a ligature around the artery, though the struggles of the patient and the great fear lest she should have a hysterical convulsion during the operation, made this a rather difficult undertaking. Every thing went on favorably, and in the course of two weeks she was prepared to have the whole tumor removed.

On the 20th of November, the patient having been brought into the amphitheatre, Prof. Pancoast removed the whole of the diseased mass after the following manner:

The face being placed opposite a strong light, and the head of the patient supported against the breast of an assistant, an incision was made through the cheek, from the left angle of the mouth, in a semicircular direction, towards the outer canthus of the eye, after the manner of Velpeau's operation, so as to avoid wounding the parotid duct and the portio dura nerve.

The flap was then rapidly dissected back from the bone, and with a small saw the superior maxillary was divided transversely by an incision parallel to the alveolar processes, then with a strong pair of cutting forceps a vertical incision was made through the bone at each end of the transverse, one by the side of the last incisor tooth on the right side, and the other by the last molar tooth on the left, and the mass, thus isolated from its bony attachments, was quickly removed. The hemorrhage following was restrained by the use of the actual cautery; and the wound having been plugged with lint, the lips of the incision were united by hair-lip suture and adhesive strips, and the patient placed in bed, and ordered to live on a liquid diet.

The wound in the cheek healed up by first intention in five days, and, on the tenth day after the operation, the condition of her mouth was such that she was enabled to eat meat, a thing which she had not done before for several months. The wound of the jaw rapidly filled up with healthy granulations, and in three weeks after the operation she was discharged cured. The ligature of the carotid came away on the 30th of December, and in the first week of January she returned to her friends in Bucks County, highly pleased with the results of the operation.

MIDWIFERY AND DISEASES OF FEMALES.

OVARIAN DISEASE—*Removal of the Tumor—Recovery.* By H. Miller, M. D., (*Western Jour. of Med. and Surg.*)—The patient, a widow aged 37, first observed a tumor of no great size in the right iliac region, some time during the fall of 1847, from which time it began to increase rapidly until it attained an enormous size. She had felt no acute pain in the tumor; menstruation was absent from the first. She insisted upon its removal. On the 29th of March, 1848, a consultation was called, consisting of Prof. Gross, Drs. Caldwell, Bayless and Colescott. The tumor was punctured about three inches below the umbilicus, and *twelve pints* of a characteristic fluid was discharged. When the fluid ceased to flow, the abdomen was flaccid to the left of the linea alba, and a short distance to the right; but in the right iliac region reaching up to the ribs of the same side, it felt hard and unaltered in shape, no unpleasant symptom followed the tapping. On the 6th of April, following, in the presence of the above-named gentlemen and several others, chloroform was administered: after which, an incision was made, extending from the umbilicus to the pubes in the ordinary manner. The tumor was found adherent, slightly, to the omentum and parietes of the abdomen; the adhesions were broken up, after which several punctures were made in the tumor in order to diminish its size sufficiently to allow of its passage through the incision, after which a ligature was applied to its pedicle and the tumor removed, some hemorrhage followed, which required the application of a second ligature; this, together with the fluid from the punctured cysts, which flowed into the abdominal cavity was carefully sponged out and the incision was closed by the interrupted suture. No unfavorable symptom followed; the sutures were removed on the 19th inst. following; on the 25th, one of the ligatures came away, and on the 7th of May, the second, at which time the wound was firmly closed, excepting at the point where the sutures came away. On the following day, she left in a wagon for her home, some distance in the country, apparently perfectly recovered. The tumor, notwithstanding the punctures and tapping, weighed nine and a quarter pounds. It is composed of many cysts of various sizes, having strong thick walls and filled with the same ropy white fluid as that discharged by the trochar.

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SINGULAR CASE OF UTERINE FLESHY MOLE. By R. R. Stone, M. D., (*N. W. Med. & Surg. Jour.*)—Mrs. H., aged 45, had been troubled with an enlargement of the uterus for some fifteen years. The distention commenced soon after a time when she considered herself pregnant, from the fact that there was a cessation of the menses at the time for some seven periods, but which again made their appearance, although quite irregular as to time and quantity. The uterus increased in size, rose in the pelvis, and seemed to go through the several stages of gestation with apparent motion of the child, until the seventh month when irregular pains commenced, and medical aid was called, but attempts to remove the then supposed dead fœtus did not succeed. She remained in that situation, partially recovering her health, but the distention remaining nearly the same, for six years, within which time she became pregnant, and was delivered of a living child. During the period of gestation the enlarged uterus extending into the upper abdominal regions, and pressed hard

upon the stomach and liver. After delivery the tumidity continued about as before pregnancy. Catamenia still irregular until last fall, when Dr. Coon, my partner, visited the patient. October 10th, by his request I saw her with him. She then presented the following symptoms. The uterus, which was enlarged to about the size of one in the seventh or eighth month of gestation, occupied principally the middle and right lower abdominal regions, the right side or the fundus being very hard and tender upon pressure. She suffered continually from pain, which was mostly over the region of the tumor, but extended to the loins and down the thighs. But little could be ascertained concerning the nature of the contents of the uterus by examination per vaginum, as the os uteri was rigid, nearly closed, and above the superior strait. A small quantity of sanious and purulent fluid escaped during most of the time, together with small fragments of ossific matter, resembling caries from the size of the finger-nail to mere powder. Small fleshy masses were also frequently passed, some weighing over an ounce. As the patient was extremely weak, anodynes and tonics were administered.

But little relief was at first obtained. After a time, however, she began to convalesce, and was able to be about the house and ride out occasionally, and remained so until April 30th, when, after riding six or eight miles in a lumber wagon, the former symptoms returned with increased severity. She was then seen by Dr. C. and myself. Had irregular uterine pains which distressed her much, but which were allayed by opiates. The os uteri still remained rigid. An ointment of belladonna was applied to the cervix which dilated the os tincæ in a measure. The pains, which were now permitted to go on, continued about 48 hours, when a soft, apparently fleshy mass, which presented at the superior strait, was finally, with manual assistance, expelled, when nearly a gallon of semi-purulent fluid escaped, together with so much fœtor that it was almost impossible to remain in the room. The substance expelled, upon examination, was found to consist of a homogeneous conglobate mass, weighing about four and a half pounds, of a yellowish color, resembling healthy liver in consistence, but much more elastic and covered externally with scales of ossific matter. It was about ten inches in length, four in width, and from two to three in thickness, being somewhat wedge-shaped. Upon making an incision longitudinally, a cartilaginous line was found to run transversely, and another to cross this at right angles, running the whole length.

The uterus contracted but partially at first, but it continued to contract and descend, so that at present it has assumed nearly its natural position, but is considerably enlarged, which condition I presume will remain. The ossific scales have continued to pass and are occasionally discharged at the present time. The fluid discharge continues, but in much less quantity. The patient is now able to walk a half mile, and is daily improving.

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Stricture of the Vagina Coincident with Labor.—By Prof. C. D. Meigs, (*Trans. of the Col. of Phy., Philadelphia.*)—On the 11th of April, 1845, the patient was delivered of her second child, and soon after was seized with fever, attended with some peculiar symptoms, which were found to result from a retroversion of the uterus that had occurred before the uterus had become entirely reduced to its normal size and condition after parturition. During the remainder of 1845, and the whole of the ensuing year, the patient remained in tolerable health; early in 1847, she began to complain of pelvic pain, attended with some discharge from the vagina. She at first declined submitting to an examination to enable Dr. M. to ascertain the condition of the uterus and vagina. Her symptoms, however, increasing, she permitted finally the examination to be made: the neck of the uterus was found to be in a condition which induced Dr. M. to suppose, at first, that it was carcinomatous, but on resorting to the speculum, he ascertained that the neck of the uterus was the seat of an extensive ulceration, which did not appear to be of a malignant character.

The superfices of the ulcer were equal to that of the fingers of one hand; there was considerable thickening of the parts affected, and portions of the surface were removeable in the form of scales. It was treated by the nitrate of silver, but without any benefit resulting; the acid solution of the nitrate of mercury was substituted, and under its use the ulcer healed rapidly, and the general health of the patient soon improved, and became pretty well re-established by the time the ulcer was entirely cicatrized. As the ulcer healed, however, a very considerable contraction of the upper portion of the vagina took place, by which its cavity was reduced in diameter to that of an ordinary silver pencil. By the first of January of the present year, the lady became pregnant, and about the 10th of July labor pains were experienced. In an examination, to determine the condition of the vagina and os uteri, it was with the greatest difficulty Dr. M. succeeded in introducing his index-finger through the stricture. Opiates, rest, &c., were resorted to in order to keep off the labor. On the 20th of the month, the patient had very severe pains; the membranes, which were uncommonly tough, were gradually protruded beyond the vagina. All the means calculated to produce a relaxation of the vagina were resorted to; sulphate of morphia was administered by the mouth; the patient was immersed in a warm bath; mucilaginous fluids were injected into the vagina; and the strictured portion freely anointed with an ointment containing extract of belladonna. The vagina was finally dilated by the advancing head, and on the morning of the 21st the child was born, without instrumental assistance.

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Case of Twins of Extraordinary Size.—Dr. Bertolet, of Pa., furnishes, in the Medical Examiner for August, the particulars of a case of delivery of twins, where their combined weight was twenty and three-quarter pounds. The labor of the first was natural, that of the second attended by hemorrhage which, after a short time, rendered it necessary to apply the *long forceps;* their application was attended with considerable difficulty, owing to the head not being firmly engaged in the superior strait, the child was still-born; the hemorrhage ceased immediately on its delivery—no unpleasant symptom occurred to retard the quick recovery of the patient.

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Prolonged Gestation—*A Case in which the Date of Conception was accurately ascertained.*—Dr. McIlvain, in the American Journal Med. Sci. for July, publishes the facts of a case of gestation, "prolonged to probably 296, certainly to 293 days," which occurred under his own personal observation. The parties are, says he, of unexceptionable character: and the statement of the husband may be implicitly relied upon.

Mrs. ——, whose character is above suspicion, was visited on the evening of July 1st, 1847, by her husband, whose business had compelled him to reside for more than a year before in a distant state. The husband remained till the morning of the 6th of July, and then departed, and did not return for more than nine months. On the nights of the 1st, 2d, 3d, and 4th of July, there was sexual intercourse between the parties, but none on the night of the 5th, or after. Shortly after Mrs. —— considered herself pregnant, and on the 23d of April, 1848, was delivered, after an easy labor, of a fine healthy female child, weighing nine pounds.

Dr. McI. makes the following comments on the case which we subjoin, not however with the intention of giving credence to the "conclusive evidence," which the Dr. believes the facts of the case furnish.

Supposing impregnation to have occurred on the night of the first, as a consequence of the first coition, the duration of the pregnancy must have been 296 days, but if we suppose the last copulation to be the one from which the pregnancy resulted, the period of gestation was 293 days.

This case is interesting, inasmuch as it furnishes conclusive evidence, that gestation may be prolonged to thirteen, if not sixteen days beyond the usual period.

The large size of the child—being full a pound and a half above the average weight of female children, is a circumstance in favor of its having been carried beyond the usual period.

The mother had borne three children previously, none of which weighed over eight pounds.

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Superfœtation. By A. N. Read, M. D., (*Medical Examiner.*)—A mare at one birth brought forth a well-formed *colt* and a *mule.* She was put to the horse some two or three weeks after having received the jackass. Six months after birth, both the colt and the mule were doing well. The fact of impregnation by different males is not new to physiologists, but the great difference in time in this instance, led Dr. Read to communicate the facts of the case to the profession.

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Diseases of the Os and Cervix Uteri in the Unmarried. By T. D. Massey, M. D. (*Ohio Med. and Surg. Jour.*)—The author confines his paper to description of engorgement, ulceration and induration as sequelæ of inflammation, this latter state has its rise in, 1st, retarded or retained; 2d, suppressed, and 3d, painful menstruation; either of these states may and generally do, in the unmarried female, after a time, induce congestion, terminating in inflammation of the os or cervix uteri. The first and generally characteristic symptom of this affection is irritation of the bladder, frequent desire to micturate, with pain both in retaining and passing urine. Constitutional treatment, he believes, had better be dispensed with entirely. The cold douche upon the lower part of the spine is the remedy which he places the most reliance upon, in staying the progress of the disease. Among the topical applications in the treatment of inflammation and ulceration of these parts, he gives preference to the nitrate of silver, his mode of using it is as follows:

The finger of an *elastic kid glove*, of appropriate size, is procured, and an eighth of an inch clipped off its extremity, so as to admit the tip of the finger to peer through. This is drawn upon the finger and well smeared with lard. The caustic holder (for here of course, the material to be used can only be of the solid form) is now pushed within the sheath and upon the finger, the nitrate of silver, the substance mostly used, being occluded, and the finger with is company passed within the vagina; when the os is detected, and the diseased spot located, the other hand pushes forward the holder till the caustic rests upon the extremity of the ball of the finger, which guides it to the designated point. This being done, the nitrate is withdrawn again within the glove, and removed as it entered. In this manœuvre, of course the integument of the finger is liable to suffer some. But a solution of iodide of potassium or even table-salt dissolved in lemon-juice, or tartaric acid and water previously placed convenient, and in which the finger is immersed immediately upon extraction, will remove the effects entirely.

MATERIA MEDICA AND PHARMACY.

ADULTERATED MEDICINES. *Extracts from the Hon. Dr. Edwards' Report on Imported Adulterated Drugs and Medicines, &c., read before the House of Representatives, June 2d,* 1848, (*Continued from page* 118.)—As elaborate as has been the statement of facts already presented, we are unwilling to dismiss a subject of such vast importance without presenting *additional information.* Dr. Bailey of whom we have spoken before, has had submitted to him by the committee a series of questions which we subjoin. His means of acquiring information, his careful observation, together with his general intelligence and integrity, commend to our confidence his answers to these inquiries.

Query. How long have you held the position of examiner of drugs, medicines, chemical preparations, &c., in the appraiser's department of customs at the port of New-York ?

Answer. Since the 3d day of December, 1846.

Query. What is the amount of drugs, medicines, &c., &c., annually imported into New-York ?

Answer. The merchandise of this description entered at the New-York custom-house, during the year 1847, amounted to something near one and a half millions of dollars; I cannot name the precise amount, as no separate record of that branch of trade is at present kept in the custom-house.

Query. What proportions do the importations of drugs, medicines, chemicals, &c., into New-York, bear to those entered at the other ports in the United States ?

Answer. According to the records in the Treasury Department, full three-fourths of the entire amount of that class of merchandise is passed through the New-York custom-house.

Query. Will you have the kindness to state, as near as your memory, or any memorandums you may have, serve you, the quantities of some of the more important drugs, &c., imported into the United States, or into New-York, during the past year.

Answer. The quantity of camphor, crude and refined, (principally crude,) imported into the United States during the year 1847, amounted to 177,403 lbs. Opium, imported during the same period, 85,238 lbs. The quantity of Peruvian bark imported into New-York, the same year amounted to 495,300 lbs.; Rhubarb root, 87,640 lbs.; Gum Arabic, 245,270 lbs.; Gum Myrrh, 7,300 lbs.; Iodide or hyd. potass, 18,450 lbs.; Calomel, 5,680 lbs.; Morphine, 5,600 oz.; Magnesia (calc. and carb.), 147,300 lbs.; Jalap root, 26,350 lbs.; Refined borax, 248,360 lbs.; Acetic acid, 19,700 lbs.; Sarsaparilla root, 75,000 lbs.; Oil of anise, 7,342 lbs.; Tartaric acid, 57,470 lbs.; Cream of tartar, 805,000 lbs.; Gum ammoniac, 9,490 lbs.; Gum assafœtida, 18,960 lbs.; Iodine, 6,340 lbs.; Blue pill mass, 4,475 lbs.; Sulphate quinine, 11,700 oz.; Supercarbonate of soda, 344,270 lbs.; Epsom Salts, 60,900 lbs.; Carb. of ammonia, 180,000 lbs.; Senna, 51,300 lbs.; Oil of cassia, 9,830 lbs.; Extract of liquorice, 462,000 lbs.; Balsam of tolu, 5,800 lbs.; Balsam of copaiva, 108,350 lbs.

Query. What proportion do adulterated, misnamed, and vitiated articles bear to those that are pure and of the proper strength ?

Answer. More than one-half of many of the most important chemical and medicinal preparations, together with large quantities of crude drugs, come to us so much adulterated, or otherwise deteriorated, as to render them not only worthless, as a medicine, but often dangerous.

Query. Name, as far as you can, the articles most commonly adulterated, or otherwise deteriorated, the manner of adulteration, &c., and the consequent difference in price between the vitiated and genuine article, with such other suggestions as you may deem to pertain to this question ?

Answer. Opium is at present more frequently adulterated with liquorice

paste, combined with a bitter vegetable extract, likewise with an extract made from the poppy plant, with an admixture of the leaves. An article called opium is prepared and sold for exportation in the foreign markets, composed of liquorice paste, extract of poppy-heads and leaves, and a small portion of gum tragacanth, and a bitter vegetable extract. Another article of opium comes to us, more or less, and in some instances, entirely deprived of its active principle, the same having been extracted for the manufacture of morphine.

So called opium has passed the New-York custom-house, within the last twelve months, so highly charged with liquorice paste, that not only was the smell very perceptible, but on account of the excess of saccharine matter thereby furnished, the worthless mass was alive with worms! Some of these adulterations are invoiced as low as one-third the price of pure opium, and of course are not worth that.

Calomel is adulterated with chalk, sulphate of barytes, and white lead, and furnished by the foreign manufacturer at about two-thirds the price of the genuine.

The *mercury or quicksilver* of commerce is generally impure; *lead, bismuth* and *zinc* are found mixed with it. It should never be used in the preparation of medicine without previous purification.

Red oxyde of mercury or *red precipitate* is frequently mixed with *red lead.*

Blue pill mass is greatly and extensively adulterated. This article, when pure, should contain thirty-three and a third per cent. of *mercury,* combined with *conserve of roses,* &c.; but a spurious article has been imported to a considerable extent within the past few years, which is found, on analysis, to contain less than one-fourth part of that quantity, basely mixed up with earthy substances, &c. This worthless article is purchased from the foreign manufacturer at about one-half the price of the genuine.

Sulphate of quinine, another very important medicine, is frequently adulterated with *salicine, chalk, sulphate of burytes,* &c., rendering it comparatively worthless, if not dangerous as a medicine. This spurious article has been imported and sold in New-York (neatly put up with the name, label, &c., of a popular manufacturer) by the agent of a foreign establishment, at the rate of *ninety cents* an *ounce,* when the genuine foreign article could not be purchased of the manufacturer for less than *two dollars and twenty-five cents* an ounce.

Large quantities of iodine are sent to us in bulk, and in a very impure condition, by foreign manufacturers and speculators. It is almost worthless as a medicine; but, nevertheless, it is bought up by *our* speculators, who have it neatly put up in small bottles, &c., and sell it as a good article. The same with *iodide* or *hydriodate of potass,* which is frequently found adulterated with *nit. potass, (saltpetre)* sal. acetocella, &c. *Bromide* of *potassium* is labelled and sold as genuine hydriodate.

Many of the foreign medicinal extracts are prepared and sold in reference to *price,* rather than *strength* and *purity.* The foreign manufacturers prepare any *quantity* called for. *Compound extract* of *colocynth* (as the label imports) comes to us in a manner well calculated to deceive, but on examination, is found to contain not one particle of *colocynth.* This spurious article is invoiced at about one-third the price of the genuine article. *Extract of Peruvian bark, sarsaparilla, rhubarb, hyoscyamus, jalap,* &c., &c., of a like inferior description, are constantly being imported to a greater or less extent.

Very little, if any, of pure Russian castor finds its way to this country. An imitation compound of *dried blood, gum ammoniac,* and a little real *castor,* put up in artificial bags, is the article generally met with.

But one invoice of *real musk* has been imported into New-York during the past eighteen months, while very large quantities of the artificial have been imported direct from Canton, where the manufacture is carried on to a great extent. This impure article is invoiced at less than one-fifth the price of the genuine, and is not possessed of any medicinal quality.

Very little pure and prime *gum myrrh* is imported; most of it is adulterated by the admixture of other and inferior gums.

Most of the *gum ammoniac* now imported is more or less adulterated with common resin and earthy substances. It sells for less than one-third the price of the *guttæ ammoniaca*, or pure gum. The latter is now seldom met with.

Gum assafœtida is most extensively adulterated with inferior mucilaginous gums, chalk, clay, &c. An invoice of some *four* thousand pounds of this article passed the custom-house at New-York not many months since, and not one pound of which was proper to be used for medicinal purposes without previous purification.

Peruvian bark comes greatly mixed, and no small portion of it of a very inferior and worthless quality. We know of even twenty-five distinct species of this bark, and, as may be supposed, they differ greatly in strength and price. Considerable quantities are shipped to this country after having had the active portion extracted for the purpose of manufacturing *extracts of bark*. The best article is imported or purchased for the manufacture of *quinine;* the other for powdering. It comes invoiced from five cents to one dollar per pound, according to the place of purchase and the quality of the bark. *Peruvian bark*, fit to be used in medicine, can only be bought at the place where produced, at from thirty-five to seventy and eighty cents per pound.

No pure *Aleppo scammony* has for a long time been imported through the New-York custom-house, because the article inferior in strength and purity has taken its place in the market. The *Smyrna scammony* is always adulterated with some worthless vegetable extract, flour, ashes and clay. An article *called Smyrna scammony* (and a fair imitation) is occasionally imported, which has proved to be a combination of *jalap, gamboge, chalk, gum Senegal* and *ivory black*, without a particle of real *scammony* in its composition.

Thousands of pounds of worthless rhubarb root are sent out annually to this country for a market, by foreign speculators, principally from England. London being the greatest drug market in the world, it is but reasonable to suppose that large quantities of crude drugs, of a greatly deteriorated and inferior quality, must necessarily be constantly accumulating in their warehouses, which, on account of the long existing laws of that country, cannot find a home market, and, in consequence, must either be destroyed or exported to some place where there is no law to prevent their introduction. The article of rhubarb I have alluded to, is found, on examination, to be either greatly deteriorated by age, or as having been deprived of its medicinal virtues by decoction, for the purpose (as with the Peruvian bark above named) of manufacturing extracts.

This worthless drug is generally found to be what was once East India rhubarb, and is invoiced at from four to fourteen cents per pound, when at the same time the most ordinary *fresh rhubarb* of the kind, fit to be used for medicine, cannot be purchased at the place of production for less than thirty-five to fifty dollars per hundred pounds. This trash is bought up by speculators for powdering, and is sold to the unsuspecting retailer as a "fair article."

More than one-half of the *cinnamon* imported into New-York, during the past year, was a very inferior article; some of it nearly tasteless, on account of its virtue having been extracted by distillation, in the manufacture of the *essential oil*. Most of the oil of cinnamon comes more or less adulterated with inferior oils; and the same may be said of most of the other medicinal essential oils.

More than three-fourths of what is called *Croton oil* imported, is either adulterated, or an oil of inferior quality, made from an entirely different seed from that which furnishes a genuine article.

Much of the rectified medicinal naphtha imported is a crude preparation, and very impure. This, as well as many other medicinal preparations, such, for instance, as iodine, hydriodate of potass, magnesia, Epsom salts, &c., are made in considerable quantities, without the requisite care, in the large foreign chemical establishments, where their regular business is to manufacture only

the coarser chemical preparations, used almost exclusively in the arts. Of course these articles, being hastily and imperfectly prepared out of the "odds and ends," and as rudely put up for market, can be afforded at a much less price than the pure article. It is now common for the foreign manufacturer to send out to this country these articles, on consignment, with his other preparations, used in the arts. It may not be amiss for me here to say, for the benefit of the medical profession and dealers generally throughout the country, as well as for the *army* and *navy surgeons*, who purchase chemical and medicinal preparations for the public service, that too much reliance, in their selections, must not be placed upon what purports to be the *name or label* of some noted and foreign popular manufacturers, which they may find attached to the bottle or package. For it must be borne in mind that, while many of the adulterated, fine chemicals, &c., come to us neatly put up in small quantities for the retail trade, bearing a fictitious label, much of the very crudely and imperfectly manufactured chemicals I have named, together with considerable quantities of *morphine*, is imported in *bulk*; or, in other words, in bottles or cases, containing seven pounds each, and bearing only the name of the article; giving us no clue to the real manufacturers beyond what may be gathered from the name of the exporters upon the invoice; and they are not unfrequently foreign commission merchants. Notwithstanding this, these crude and impure articles, in bulk, find, I regret to say, ready purchasers among the unprincipled dealers, who have them put up in small quantities, (similar to the genuine,) in foreign bottles, imported expressly for the purpose; to which is, afterwards, attached a neatly executed imitation label of some well-known foreign manufacturing chemist. The articles are then ready for market, and are purchased by the unsuspecting, (for circulation throughout the country,) I fear, too often, on account of the label, and general external appearance of the bottle, without proper attention to the contents. Hence the reason many chemical preparations fail to meet the reasonable expectations of the country practitioners, who have neither time, means nor opportunity of analysis.

Query.—Whence do we derive the largest proportion of these adulterated and deteriorated medicines?

Answer.—The largest quantity comes from England; but other portions of Europe furnish more or less of these base compounds and worthless drugs.

Query. Why has this base traffic been allowed to continue so long without a public exposé, and some attempt being made at New-York to arrest its progress?

Answer. Attempts have been made. The New-York College of Pharmacy have for years been engaged in the endeavor, by force of reason, to put a stop to the trade in these adulterated articles, as far as facts came before them. The medical profession have been awake to the vital importance of the subject, but, until some eighteen months past, there has been no person in charge of that branch of trade in the custom-house who had a practical knowledge of drugs and medicines in their composition, &c., from whom any data could be obtained showing the extent of these frauds.

The Hon. Jno. C. Spencer, when Secretary of the Treasury, was appealed to, to remedy the deficiency the profession felt to exist in the customs. He replied most favorably, but as the request was made about the time he retired from that office, he could not carry these wishes into effect. The present Secretary of the Treasury was next appealed to, and promptly entertained the subject as one of the greatest importance, and did not lose sight of it until effective measures were taken, at his request, to fathom the depth of the evil complained of."

AN ACT to prevent the importation of adulterated and spurious drugs and medicines.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled: That from and after the passage of this act, all drugs, medicines, medicinal preparations, including medicinal essential oils, and chemical preparations, used wholly or in part as medicine, imported into the United States

from abroad, shall, before passing the custom-house, be examined and appraised, as well in reference to their quality, purity, and fitness for medical purposes, as to their value and identity specified in the invoice.

Sec. 2. And be it further enacted, That all medicinal preparations, whether chemical or otherwise, usually imported with the name of the manufacturer, shall have the true name of the manufacturer, and the place where they are prepared, permanently and legibly affixed to each parcel, by stamp, label, or otherwise ; and all medicinal preparations imported without names affixed as aforesaid, shall be adjudged to be forfeited.

Sec. 3. And be it further enacted, That if, on examination, any drugs, medicines, medicinal preparations, whether chemical or otherwise, including medicinal essential oils, are found, in the opinion of the examiner, to be so far adulterated, or in any manner deteriorated, as to render them inferior in strength and purity to the standard established by the United States, Edinburgh, London, French and German pharmacopœias and dispensatories, and thereby improper, unsafe, or dangerous to be used for medicinal purposes, a return to that effect shall be made upon the invoice, and the articles so noted shall not pass the custom-house, unless, on a re-examination of a strictly analytical character, called for by the owner or consignees, the return of the examiner shall be found erroneous ; and it shall be declared as the result of such analysis, that the said articles may properly, safely, and without danger, be used for medicinal purposes.

Sec. 4. And be it further enacted, That the owner or consignee shall at all times, when dissatisfied with the examiner's return, have the privilege of calling, at his own expense, for a re-examination ; and, on depositing with the collector such sum as the latter may deem sufficient to defray such expense, it shall be the duty of that officer to procure some competent analytical chemist possessing the confidence of the medical profession, as well as of the colleges of medicine and pharmacy, if any such institutions exist in the State in which the collection district is situated, who shall make a careful analysis of the articles included in said return, and a report upon the same under oath ; and in case the report, which shall be final, shall declare the return of the examiner to be erroneous, and the said articles to be of the requisite strength and purity, according to the standards referred to in the next preceding sections of this act, the entire invoice shall be passed without reservation, on payment of the customary duties ; but, in case the examiner's return shall be sustained by the analysis and report, the said articles shall remain in charge of the collector, and the owner or consignee, on payment of the charges of storage, and other expenses necessarily incurred by the United States, and on giving a bond with sureties satisfactory to the collector to land said articles out of the limits of the United States, shall have the privilege of re-exporting them at any time within the period of six months after the report of the analysis ; but if the said articles shall not be sent out of the United States within the time specified, it shall be the duty of the collector, at the expiration of said time, to cause the same to be destroyed, holding the owner or consignee responsible to the United States for the payment of all charges in the same manner as if said articles had been re-exported.

Sec. 5. And be it further enacted, That in order to carry into effect the provisions of this act, the Secretary of the Treasury is hereby authorized and required to appoint suitably-qualified persons as special examiners of drugs, medicines, chemicals, &c. namely : one examiner in each of the ports of New-York, Boston, Philadelphia, Baltimore, Charleston, and New-Orleans, with the following salaries, viz, at New-York, sixteen hundred dollars per annum ; and at each of the other ports above named, one thousand dollars per annum ; which said salaries shall be paid each year, quarterly, out of any moneys in the treasury not otherwise appropriated ; and it shall be the duty of the said Secretary to give such instructions to the collectors of the customs in the other collection districts, as he may deem necessary to prevent the importation of adulterated and spurious drugs and medicines.

Sec. 6. And be it further enacted, That the special examiners to be appointed under this act, shall before entering on the discharge of their duties, take and subscribe the oath or affirmation, required by the ninth section of the act of the thirtieth of July, eighteen hundred and forty-six, entitled "An act reducing the duty on imports, and for other purposes."

Sec. 7. And be it further enacted, That the special examiners authorized to be appointed by the fifth section of this act, shall, if suitably-qualified persons can be

found, be taken from the officers now employed in the respective collection districts; and if new appointments shall be necessary for want of such persons, then, as soon as it can be done consistently with the efficiency of the service, the officers in said districts shall be reduced, so that the present number of said officers shall not be permanently increased by reason of such new appointments.

Approved June 26, 1848.

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Internal Use of Chloroform, its Effects, &c. By H. Hartshorne, M. D., (*Amer. Jour. Med. Sci.*)—When the inhalation of this substance as an anæsthetic began to attract universal attention, we made at the hospital, at Dr. Wood's suggestion, some investigation into its effects when taken internally. Although very sweet, it is so pungent as to require a large proportion of gum water to obtund its effect on the tongue, throat, and even stomach.

Seventy-five drops gave me a sensation of general diminution of consciousness and sensorial capacity. Sight, hearing and touch were all made less impressive, but no feeling of exhilaration or of derangement occurred. Drowsiness was positive. The pulse was not at all accelerated; in fact, it was two beats less in the minute. The same effects followed in two other medical gentlemen from two or three times the quantity. One swallowed a drachm, or over 200 drops. He became very heavy, and after a short interval went into a sound sleep. The effect passed off in all of us after an hour or two. No one felt exhilarated or deranged as by alcohol, and in none was the pulse increased. The conclusion was positive in all our minds that it is a *direct sedative* to the cerebro-nervous system—a sedative narcotic.

A woman who suffered with a most obstinate and painful neuralgic affection of the side and head, took 75 drops at night. She slept better than she had for weeks, even after inhaling ether or chloroform, as she had repeatedly; and was also unusually comfortable the next day. She then continued to take it, in a somewhat larger dose, for two or three weeks, every night; and improved under this more than under any other treatment.

From the pungency of chloroform I was induced to expect carminative powers. Upon trial in a number of cases of flatulent colic, I found it in the dose of 75 drops, sometimes repeated, to give prompt relief. It was then used as a substitute for Dover's powder as a soporific at night in rheumatism; and there answered admirably. There was but one patient, a woman with cancer of the uterus, to whom it was given as an anodyne, who alleged that it disagreed with her, causing headache and sickness of stomach without sleep or relief.

Believing it to be less constipating and more purely sedative than morphia, I tried the addition of it to cough mixtures in place of the latter. But here the objection presents, that so large a quantity of mucilage is required, as to oppress the stomach; or, if given in alcoholic solution, the stimulus of this vehicle might be undesirable. Still, as it is very pleasant to the taste, it might be added in small quantity to such mixtures, lessening the usual amount of opium in them.

It might be worth while to try it by enema in strangulated hernia, as a powerful relaxant to the system generally, and at the same time an excitant of peristaltic action. It is our impression that it is somewhat laxative even when taken by the mouth; but our experiments did not render this certain. There is no doubt, however, that as a purely sedative narcotic and carminative, having the advantage of a sweet, pleasant taste it might often be made a serviceable medicine.

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On the Effects of Sub-borate of Soda, (*Annalist.*) By J. C. Hubbard, M. D.—If an aqueous sol. of ʒiss. sub-borate soda is taken at bed-time per anum and retained, the individual receiving it will in a few hours be found laboring

under a high degree of venereal excitement. The pulse will be more resisting and the skin hotter than it is in a normal state; there will be a slight ringing in the ears, a sense of heat, and fulness in the loins. If the subject is an adult male, erection of the penis, an emission of the semen (partly insensible) follows. These conditions will commonly pass off by morning. When double the quantity of sub. bor. soda above mentioned is taken in the same manner, the excitement of the genital organs will be intense, the pulse full and hard, loud ringing in the ears, a sense of fulness, heat and soon after, absolute pain in the cerebellum.* Accompanying these symptoms are pain and heat in the lumbar division of the spine, frequent involuntary discharges of semen, from three to five during a night. With the exception of the emissions, the detailed effects of the last experiment will be exhibited for the following day. These facts prove that the borate of soda can stimulate the sexual arrangement to the last degree, and kindle up an action in the arterial system in a measure independent of venereal orgasm, because it continues many hours after the latter sensations subside. Richter, Hufeland, Kopp and others commend its emmenagogue powers. The last authority says, it is well adapted to cases of obstructed menstruation attended by general plethora and febrile habit of body. How can it be so? Do not its emmenagogue powers grow out of the local excitement it gets up? We have used it several times with prompt success in cases of suppression that defied other remedies. It was preceded by preparatory treatment and given in xv. gr. doses every eight hours.

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Kreasote in Erysipelas.—Dr. Fahnestock, in a letter to the editor of the American Jour. of Med. Science, extracts from which may be found in the July number of that Journal, says, that during a practice of many years he has been in the habit of using kreasote in erysipelas of the face (as well as on all other parts of the body,) in both its simple and phlegmonous forms, confining local treatment to this article alone. And such has been the success attending its use, says he, that I have yet to witness a case which has not yielded to it. His mode of using it is to apply the pure kreasote by means of a camel's hair brush over the whole of the affected surface, extending it some distance beyond the inflamed part, at the same time administering a dose of calomel followed by a sufficient portion of jalap to secure free catharsis. When the mucous membrane of the mouth and fauces is affected he applies to these parts a strong solution of nitrate of silver, say 3ss. to 3j. to ℥j. of distilled water. In the phlegmonous form he has found it necessary to repeat the application more frequently than in the simple. A very good mode is to sprinkle the surface of a poultice composed of bread and water and apply nearly cold to the part, or keep cloths wet in a strong solution constantly applied to the part. The kreasote, when applied, should cause the parts to become white immediately. If this does not occur it is not pure. The skin does not become the least marked by its use. Dr. F. says that he was induced to make trial of this remedy by a hint which M. Dupuytren threw out in a small pamphlet in which he supposed it might be a good remedy in this disease.

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Quinine—*Effects of, in Inflammatory Affections.*—Dr. Shanks has recently, in the New-Orleans Medical and Surgical Journal, reported two cases of

* Where the phrenologists locate their organ of amativeness.

puerperal fever which tend to show that after free depletion by means of the lancet, although pain is present, quinine in large doses combined with morphine may prove beneficial. In the cases related when the system was brought so fully under the influence of the quinine as to diminish the general nervous sensibility, which was evinced by the relief of pain and the insensibility to sound, profuse and continued perspiration was produced, more like the perspiration produced by the full influence of tartarized antimony than any thing else. To this sedative and sudorific effect of large doses of quinine is its curative influence to be attributed in cases of extensive inflammation of serous membranes; for by its influence, used in that way, vascular action, produced by general nervous excitement from local irritation or inflammation, after sufficient abstraction of blood may not only be controlled, but its cause removed and its effects relieved, by its influence in subduing morbid excitability—equalizing the circulation—producing copious perspiration, and thus relieving the congestion and inflammation of the interior serous membrane and other viscera, and preventing their consequences—adhesion, effusion, suppuration, &c. In speaking of its further application to the treatment of inflammatory affections, Dr. S. remarks:

In further illustration of the result of many years' careful observation and experience of the effects of large doses of quinine, so repeated as to produce, and keep up for a time, a decided impression, it is proper to state, that it can only be used in that way with safety and benefit, in cases where there is considerable vigor of constitution, and more than the normal state of vascular excitement, at the time of its employment, or expected to occur by the time the system is impressed by its febrifuge influence. If this condition of the system does not exist, and especially if it be much weakened by previous disease, quinine given in large doses may so overwhelm the nervous system as to place the whole organism below the point of healthy or curative functional action.

Under these circumstances, and in conditions of the system not tolerating its use in large doses, I have seen cases when the frequent, small and feeble pulse, the cold extremities, the relaxed skin, the profuse perspiration, and all the symptoms indicating collapse, and a fatal giving way of the vital powers, were doubtless, hastened, if not positively produced by the injudicious employment of large doses of quinine; and death resulted from its depressing and poisonous influence having been carried beyond the point for healthful re-action.

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Sulphate of Quinine—*Remarks upon the Action of.*—Dr. William A. Booth, in the New-Orleans Med. & Surg. Jour. for July, after detailing a number of cases which tend, in his opinion, to establish the true action of this remedy, says that quinine occupies a middle ground between stimulants and tonics. It is more speedy in its operation, and evanescent in its effects, than the medicines usually classed under the head of "tonics." It is less so than those usually classed as "stimulants"—it also possesses astringent qualities. The correctness of this assumption is confirmed by its taste and by its effects when taken internally. When the secretory system is performing its functions properly, who has not seen the tongue and fauces become dry under its use? These effects, remarks Dr. B., arise in part from its astringency, and teach the propriety and frequent necessity of preceding it by, or combining it with, mercury. "The astringency of quinine is sometimes directed to the

kidneys, with such force as to cause suppression of urine." Dr. B. "considers it a nervous tonic," and believes it to possess great anti-periodic powers, and that this power depends upon its *anti-congestive* property, and this property to be the result of *a tonic action* upon the nervous system. Quinine has no tendency to excite or regulate the secretions, and its direct power over the circulatory system is excessively limited. In closing his paper on the action of quinine, Dr. Booth remarks:

As an anti-periodic, I deem it applicable to all affections characterized by periodicity, regardless of their name, location or supposed nature.

As an anti-congestive it is applicable to all cases of *acute* congestion. I means to describe by the word "acute," those cases in which the congestion appears suddenly, or admits of or requires speedy relief. The quinine to precede, accompany or follow depleting, mercurial or other remedies, according to the time allowed and the condition of the patient. When it is admissible, the last is the most judicious course.

The anti-periodic and anti-congestive powers of quinine being mere results of a tonic or stimulant property, I esteem it an appropriate remedy in debility. As, however, it is a tonic or stimulant *sui generis*, acting with less rapidity than the last, and less permanency than the first class, common sense would suggest that medicines plainly belonging to one or the other of these classes should be selected, where rapidity of stimulation or permanency of effect is desirable.

The astringency of quinine and the fact that it sometimes acts as a local irritant add weight to these considerations.

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Smart-Weed.—*A Remedy for Mercurial Salivation and Aphthous Stomatitis.*—Dr. Wilcox, in the American Jour. Med. Sci. for July, communicates his observations on the use of a decoction of the leaves of this article as a remedy. He was first induced to give it a trial from the fact that farriers employ it with success for the cure of that disease of the salivary glands of the horse, called slabbering. In speaking of the success attending its use, he says: "I have now employed it in about twenty cases of mild mercurial salivation, and have uniformly procured the same prompt and complete relief. I have tried its use in two of the severer forms, attended with numerous and deep ulcerations; these cases were made much more comfortable, but not cured. The benefit I derived from it in salivation, induced me to make trial of it in the follicular stomatitis of nurses, which appears to be endemical to the Valley of the Chemung River. Within the last three years I have prescribed its use in ten cases, and without an exception, they have been speedily and entirely relieved. I am not prepared to state what can be accomplished with it in those cases of aphthous stomatitis connected with a tuberculous state of the constitution, having yet had no such case; neither have I used it where the ulcerations were deep; in such cases other remedies will doubtless be more effective. My mode of using it, is to take about an ounce of the dried leaves and tops, water one pint; boil twenty minutes and strain. The mouth is washed with it every hour through the day."

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Stillingia Sylvatica, *Queen's Delight.*—Dr. F. Y. Simons, (*Charleston Med. Jour. and Rev. for May,*) claims to have been the first medical practitioner who fully tested the medical virtues of this plant. His observations were published in the American Medical Recorder, Vol. XIII., 1828. The plant is indigenous to the state of South Carolina, and grows so luxuriantly that it might become an article of commerce. Dr. S. believes that it is likely

in a great degree, to supersede Sarsaparilla, or, at least, become a powerful adjuvant. It is not mentioned in any of the dispensatories or pharmacopœias of the day—the part which he recommends and uses in medicine, is the root, which may be given in decoction, tincture or powder. In speaking of the use and mode of preparation of these several forms, Dr. Simons gives the following formulæ.

Decoction.—To about four ounces of the Sylvatica cut up into small pieces, two-thirds of a pint of water is poured, it is put on a slow fire, the vessel covered, and allowed to simmer down to half a pint. The slower the boiling, the stronger and more efficacious the decoction. At first, half a wine-glassful is given every three hours, increasing or lessening the dose, according as the stomach can bear it. In some cases, it is given morning, mid-day and night; say a wine-glassful, increasing as much as the stomach will conveniently bear, until the half pint is taken during the day. This plan, although troublesome, wherever the root can be obtained easily, is a good method of prescribing it.

Tincture.—To about four ounces of the root cut up, a pint of alcohol is poured; it is every now and then shaken; suffered to remain until the active principle is well extracted—when it is poured off and used. The dose is from a half to a tea-spoonful two or three times a day, to be increased if necessary. The taste of the tincture is harsh, rather styptic and mucilaginous. It smells very much like laudanum. This is a very good method of exhibiting it.

Powder.—I have never used this myself, but fifteen to thirty grains is about the average dose.

The Styllingia Sylvatica, given in the manner above described, I regard as, at least, one of the most powerful and valuable vegetable alteratives which we know of; and forms an admirable substitute for mercury, when that medicine would be inadmissible—such, for instance, as secondary syphilis more particularly. In all cases where an alterative is required, it will be found useful singly, or associated with other medicines.

In large doses, it acts as a powerful emetic and purgative, and an efficient one too; although by no means equal to tartar.

He has used the above and following formulæ for upwards of twenty years, and has found it the best vegetable alterative, separate or combined with sarsaparilla; especially when mercury is inadmissible, or to counteract the ill effects of it.

1. ℞.—Syrup of Sarsaparilla, - - ℥xvj.
   Tinct. of Styllingia, - - ℥iv.

A table-spoon or ½ an ounce a dose—three or four times a day.

2. ℞.—Tinct. of Styllingia,
   Tinct. of Jalap,
   Tinct. Aromatic of Senna, each - ℥j.

Take a table-spoon three or four times a day, increased or diminished according to the nausea and purgative effects.

Again, a decoction of Styllingia, combined with sarsaparilla, guaiac., liquorice root, &c., &c., will make an excellent alterative and diet drink.

In all the preparations, it is important to ascertain if the plant has lost any of its properties, or rather the root of the plant which is used; the peculiarities of which, I have already stated. Like sarsaparilla, and other vegetable medicines, if not in good condition, it will be inert.

The extract of Styllingia, in five grain doses, is a good substitute for blue pill, where the individual is susceptible of salivation.

MISCELLANEA.

Anatomical Peculiarity. By R. Campbell, M. D., (*Southern Med. & Surg. Jour.*)—Not finding it recorded in any anatomical work we have examined, we deem the following coincidence worthy of notice:

The direction of the canals for the passage of the nutritious vessels into the long-bones of the extremities varies in the *erect position* of the body, thus—

Humeri, Tibiæ, Fibulæ	Obliquely downwards.	Ulnæ, Radii, Femora,	Obliquely upwards.

Now when the limbs assume a position *corresponding with that of the fœtus in utero*—(admitting the head to be up)—viz: the forearms flexed upon the arms, the arms upon the chest, the thighs upon the abdomen and the legs upon the thighs, the canals will *all* be found to pursue a course *directly downwards.*

The entrances to these canals are generally situated about the centre of the bone, or at the junction of the upper and middle thirds of the shaft. The location may vary slightly, but their direction is always the same; to ascertain which, we have examined all the bones within our reach.

Perhaps this may prove to students a useful formula, for impressing upon the memory the situation and direction of these canals.

Code of Ethics of the Philadelphia College of Pharmacy.—Pharmacy being a profession which demands knowledge, skill and integrity on the part of those engaged in it, and being associated with the medical profession in the responsible duties of preserving the public health, and dispensing the useful though often dangerous agents adapted to the cure of disease, its members should be united on some general principles to be observed in their several relations to each other, to the medical profession, and to the public.

The *Philadelphia College of Pharmacy* being a permanent, incorporated institution, embracing amongst its members a large number of respectable and well-educated apothecaries, has erected a standard of scientific attainments, which there is a growing disposition on the part of candidates for the profession to reach; and being desirous, that in relation to professional conduct and probity, there should be a corresponding disposition to advance, its members have agreed upon the following principles for the government of their conduct:

1st. *The College of Physicians of Philadelphia* having declared that any connection with, or moneyed interest in apothecaries' stores, on the part of physicians should be discountenanced; *we, in like manner, consider* that an apothecary being engaged in furthering the interests of any particular physician, to the prejudice of other reputable members of the medical profession, or allowing any physician a percentage or commission on his prescriptions, is unjust toward that profession and injurious to the public.

2d. As the diagnosis and treatment of disease belongs to the province of a distinct profession, and as a pharmaceutical education does not qualify the graduate for these responsible offices, we should, where it is practicable, refer applicants for medical aid to a regular physician.

3d. As the practice of Pharmacy can only become uniform, by an open and candid intercourse being kept up between apothecaries, which will lead them to discountenance the use of secret formulæ, and promote the general use and knowledge of good practice, and as this College considers that any discovery which is useful in alleviating human suffering, or in restoring the diseased to health, should be made public for the good of humanity, and the general advancement of the healing art,—no member of this College should originate or prepare a medicine, the composition of which is concealed from other members, or from regular physicians.

Whilst the College does not at present feel authorized to require its mem-

bers to abandon the sale of secret or quack medicines, they earnestly recommend the propriety of discouraging their employment when called upon for an opinion as to their merits.

4th. The apothecary should be remunerated by the public for his knowledge and skill, and in his charges should be regulated by the time consumed in preparation, as well as by the value of the article sold; although location and other circumstances necessarily affect the rate of charges at different establishments, no apothecary should intentionally undersell his neighbors with a view to their injury.

5th. As medical men occasionally commit errors in the phraseology of their prescriptions, which may or may not involve ill consequences to the patient if dispensed, and be injurious to the character of the practitioner, it is held to be the duty of the apothecary, in such cases, to have the corrections made, if possible, without the knowledge of the patient, so that the physician may be screened from censure. When the errors are of such a character as not to be apparent, without the knowledge of circumstances beyond the reach of the apothecary, we hold him to be blameless in case of all consequences, the prescription being his guarantee, the original of which should always be retained by the apothecary.

6th. Apothecaries are likewise liable to commit errors in compounding prescriptions,—*first*, from the imperfect handwriting of the physician; *secondly*, owing to the various synonyms of drugs in use, and their imperfect abbreviation; *thirdly*, from the confusion which even in the best regulated establishments may sometimes occur, arising from press of business; and *fourthly*, from deficient knowledge or ability of one or more of the assistants in the shop, or of the proprietor.

We hold that in the first three instances named, it is the duty of the physician to stand between the apothecary and the patient, as far as possible; and in the last that he should be governed by the circumstances of the case—drawing a distinction between an error made by a younger assistant accidentally engaged, and a case of culpable ignorance or carelessness in the superior.

7th. As the apothecary should be able to distinguish between good and bad drugs, in most cases, and as the substitution of a weak or inert drug for an active one, may, negatively, be productive of serious consequence—we hold that the intentional sale of impure drugs or medicines, from motives of competition, or desire of gain, when pure articles of the same kind may be obtained, is *highly culpable*, and that it is the duty of every honest apothecary or druggist to expose all such fraudulent acts as may come to his knowledge. But in reference to those drugs which cannot be obtained in a state of purity, he should, as occasion offers, keep physicians informed of their quality, that they may be governed accordingly.

8th. As there are many powerful substances that rank as poisons, which are constantly kept by apothecaries, and prescribed by physicians, and which are only safe in their hands, as arsenious acid, vegetable alkaloids, ergot, cantharides, etc.—we hold that the apothecary is not justified in vending these powerful agents indiscriminately, to persons unqualified to administer them, and that a prescription should always be required, except in those cases when the poisons are intended for the destruction of animals or vermin—and in these instances only with the guarantee of a responsible person. And we hold that when there is good reason to believe that the purchaser is habitually using opiates or stimulants to excess, every conscientious apothecary should discourage such a practice.

9th. No apprentice to the business of apothecary shqld be taken for a less term than four years, unless he has already served a portion of that time in an establishment of good character. Apprentices should invariably be entered as matriculants in the school of pharmacy, and commence attendance on its lectures at least two years before the expiration of their term of apprenticeship; and as the progress of our profession in the scale of scientific attainment must

depend mainly upon those who are yet to enter it—it is recommended that those applicants who have had the advantage of a good preliminary education, including the Latin language, should be preferred.

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Tying the Internal Iliac.—By the Boston Medical and Surgical Journal for Oct. 11th, we learn that Dr. H. J. Bigelow, of the Mass. General Hospital, has recently tied the "internal iliac," for what was supposed to be false aneurism of the gluteal artery. The patient at the time was under the influence of ether, no interruptions occurred, and only a small quantity of blood flowed. According to a late report of the case, some peritoneal inflammation existed. Since then, (the same journal continues) we have not heard, but fully expect a satisfactory result.

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The Anniversary Dinner of the Society for the Relief of Widows and Orphans of Medical Men, will take place on Monday, November 13th, at the *Astor House*. Price of tickets, $3 00.

STEWARDS.

Abram Du Bois, Edward L. Beadle,
Jas. R. Wood, Wm. Rockwell,
John G. Adams, John T. Metcalfe.
Saml. T. Hubbard.

PART FOURTH.

FOREIGN MEDICAL RETROSPECT.

ANATOMY AND PHYSIOLOGY.

On the Blood-Vessels of the Nerves of the Heart. By Joseph Swan, F. R. C. S., &c. (*Lond. Med. Gaz.*)—The superficial blood-vessels placed just underneath the pericardium, and the interspersed fat, have not been noticed, especially with respect to their very interesting arrangement in relation to the nerves.

Many years ago, I injected with quicksilver numerous transparent vessels running in lines on the surface of the heart of a calf a few days old: and lately I have examined the nerves of the heart of an ox, which weighed rather more than five pounds and a half, and as the auricles were quite open, it was drained of nearly all its blood. On the surface the numerous nerves were plainly seen like white lines as far as the fat was absent; on the surface of these white lines there was a transparent fainter line, which I believed to be a vessel, but from its emptiness I could not well determine its nature: on removing the pericardium and exposing some of those white lines, I found them as flat as the retina; but on tracing them upwards they became less broad, and appeared much smaller, especially near their connections with the trunk or plexus from which they proceeded. On tracing one of these lines upwards from the apex, I did not find it a single chord; but when it advanced more to the base of the heart, it divided and sent one of its portions deep, some part of which appeared to communicate with a deep artery and another part to rise to the surface amongst the fat, which from the ultimate transparency and situation, I believed to be composed, either of veins or absorbents. As I felt dissatisfied about the nature of the white lines on the preceding heart, I procured another as large, but had a portion of each lung left attached to it, by which means the blood was kept in the vessels: on examining the surface, I saw the coronary arteries and veins, and the white lines crossing them obliquely, as described by Scarpa; but they were accompanied by vessels of the size of thick hairs, filled with blood, one on each side; although these appeared as veins, I believe there is also an artery and absorbent. The whole surface of the heart was covered with similar vessels filled with blood.

The trunks of the cardiac nerves of the ox are very small in proportion to the weight of the parts they supply; their branches also appear remarkably small before they are joined by their respective arteries, and in fact, their continuations in the white lines on the surface of the heart, do not contain near the quantity of nervous matter represented by some anatomists.

The arteries of the nerves are of large size in proportion to the quantity of nervous matter the nerves contain. Some branches of the nerves travel a considerable distance obliquely before they accompany or embrace an artery; previously, some of these nerves have not any visible artery. In some instances, a larger nerve joins a proportionate artery, and both divide equally, being continued as the separate white lines or nerves on the surface of the heart. The artery of a nerve, in descending, forms some transverse connections with that

of contiguous ones, and with several subjacent arteries. I have not succeeded in filling with injection the arteries throughout the nerves; nevertheless, it may be fairly concluded that the arteries are continued to the termination of the nerves, as vessels can be discovered on them for some days, especially after the heart has been immersed in water; and as the lateral veins can be distinctly traced, filled with blood, to the end of every nerve on the surface of the heart; and they are purposely arranged at the side of the nerve for returning its blood.

The lateral vessels on each side of the nerve are the veins, which have numerous transverse branches for communicating with those of the adjoining nerves. They empty themselves into large venous trunks at different places. I have injected several of these lateral vessels, and their transverse branches, with quicksilver. There is some difficulty in injecting them as well as the arteries, as all the muscular branches require to be filled before the injection passes freely into them.

In the moist state the artery may continue distinctly visible for some days, whilst the veins become empty and disappear. In the dried state, on the contrary, the arteries generally disappear, although in some instances a central mark may be observed; but the veins remain apparent from the contained blood, and form, as it were, a distinct skeleton of the nerve.

In the moist state the empty veins appear as part of the nerve; and their transverse branches, by joining together the adjacent nerves, may be easily mistaken for nervous connections or communications.

As the artery and veins form part of the bulk of the nerve, they may add more or less to its size, according to the nature of the fluid in which the organ is preserved; also according to the manner in which they are observed: so that they may appear larger by imbibition whilst contained in the fluid, and smaller by their emptiness when exposed to the air. As putrefaction has advanced, the nerves have appeared smaller; whilst marks, as of carbonaceous matter, have been found about them, and were probably derived from the veins.

The uses of these vessels are for supplying the nerves with blood, and allowing an easy return of it during the action of the heart. The uses of the other parts of the superficial plexus placed just underneath the pericardium, are for supplying the fat, the pericardium and the secretions.

There is an especial analogy of arrangement, and not improbably of some functional power, between the ciliary nerves and arteries, independently of the retina, and those of the heart. Both are affected in a somewhat similar manner in the passions; from sympathy with other organs, and from a deficiency of blood. The small arteries for the nerves may be influenced momentarily with the nerves from mental emotion or bodily disorder: the vital stimulus their blood affords may be thus withheld from the nerves, and fainting or instant death be produced, especially when the heart has been impoverished by the diminution of the calibre or activity of the coronary arteries, through the ossification or thickening of their coats.

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On the Composition of the Splenic and Portal Blood. By M. J. Béclard.—In a memoir lately presented to the Parisian Academy of Sciences, on the functions of the spleen and liver, the contents of which are based upon the results of comparative analyses of the blood of the splenic and portal veins, M. J. Béclard observes that his analyses of arterial blood confirm the opinion generally entertained, that, from whatever part of the arterial system it is taken, its composition is invariably the same. Arterial blood comes from one organ, viz. the lungs, passes through one organ, the heart, and is then distributed to all parts of the body. Venous blood, on the contrary, is derived from every organ of the body; consequently has sources as numerous as the organs themselves, and may be supposed to present certain differences in composition from whichever organ it is examined. With regard to the differences

between arterial and venous blood generally, M. Béclard states, that, having in a series of experiments compared the blood of the carotid artery with that of the jugular and crural veins, he found a diminution of corpuscles and a slight increase of fibrine in the venous blood.

The spleen resembles a gland in many respects, but differs in having no excretory duct: hence it is necessary to examine the blood for an explanation of its use. The results of thirty-two experiments, in which blood was drawn from the splenic and from the jugular veins in living animals, and a comparative analysis made of the fluid from both these sources, showed that the blood returning from the spleen invariably contains fewer corpuscles, more albumen, and rather more fibrin, than the blood in the jugular vein: hence the opinion that the spleen is the organ for the formation of blood-corpuscles is no longer tenable: it seems rather to be the site of their destruction.

Since the trunk of the portal vein is formed by the junction of the splenic with the superior mesenteric, it appeared to M. Béclard that, to obtain a correct analysis of the portal blood, the contents of the superior mesenteric should be examined previous to this vein being joined by the splenic; for the blood in the portal vein itself will be mingled with that from the spleen. From many examinations of the blood of the superior mesenteric, he finds that, as a rule, the quantity of its albumen is considerably increased during the early period of digestive absorption, while in the latter periods of this absorption the quantity of corpuscles is greatly increased. He did not find that the proportion of fatty matter was ever greater in the blood of the superior mesenteric vein than in that of the rest of the venous system—an observation which makes it probable that nearly all the fatty matter removed from the contents of the intestinal canal is taken up by the lacteals, and very little, if any, by the blood-vessels.—*Lond. Med. Gaz. from Comptes Rendus*, 1848.

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On the Elastic and Contractile Tissue of Arteries, (Baly and Kirkes' Supplement to Müller's Physiology.)—The statement made by Professor Müller, that the middle coat of arteries does not possess any muscular contractility, requires to be somewhat modified, principally on account of the investigations of Henle, which have shown that, besides elastic tissue, the middle arterial coat is provided with fibres in all respects analogous to those of organic muscle.

This discovery is one of considerable importance, because it serves to explain what was hitherto unintelligible, the well-known property possessed by arteries, especially by the smaller ones, of contracting, under certain circumstances, to a diameter smaller than that which their elasticity alone could enable them to assume. Although this property has been matter of almost universal observation, yet by few writers has any plausible explanation of it been suggested. The sagacity of John Hunter, unaided by microscopic evidence, led him to conclude that the contraction of arteries was really a muscular act. Yet this opinion appears to have been lost sight of, for most writers since Hunter's time, including Professor Müller, have attributed the contraction of the arterial coats to a peculiar vital property, to which they gave the name of *tonicity*, or insensible contractility, without being able to refer this property to any definite structure. In the last German edition of the first volume of his work, Professor Müller alludes to the discovery by Henle, and considers it probable that the fibres described by him are the seat of the contractile power of the arteries, though he appears disinclined to admit their muscular nature.

Chemical evidence, also, in favor of Henle's account, has been procured by Dr. Retzius, who finds that a solution of the arterial coat in acetic acid is precipitated by cyanide of potassium; this shows that some elements besides cellular and elastic tissues enter into its composition, for the solution in acetic acid of neither of these tissues is precipitated by cyanide of potassium: and

that organic muscular fibre constitutes one of the other elements has since been rendered tolerably certain by Dr. F. C. Donders, who, by acting upon the middle arterial coat of a young sheep with a solution of potash, observed that in two or three hours the fibres of the coat separated from each other, became granular, and then dissolved,—changes exactly similar to those which he found organic muscular fibres, under like circumstances, to undergo. The existence of muscular fibres in the middle arterial coat is also inferred by the same physiologist from the effects produced upon it by the action of nitric acid and ammonia. When strong nitric acid is applied to a proteine compound, it forms with it what is termed xanthoproteinic acid, which, with ammonia, produces a yellow xanthroproteinate of ammonia. On applying this test with the requisite caution to the coats of blood-vessels, Dr. Donders found that the middle arterial coat alone assumed the characteristic yellow color. The other coats, as well as the coats of veins, remained unchanged in color. But the most satisfactory evidence is that furnished by some recent experiments of Ed. and E. H. Weber, in which they applied the stimulus of electro-magnetism to small arteries. One principal circumstance which induced Professor Müller to deny the muscularity of arteries was the inability of himself and of other experimenters who had occupied themselves on the subject to produce the slightest movements in arteries by means of galvanic and electric stimuli, while in all true muscular tissues the stimuli give rise to manifest contractions. An explanation of the failure of these physiologists may be found in the circumstance that in nearly all their experiments the arteries examined were of large size, such as the aorta and the carotids, in which the thickness of the muscular coat is comparatively small. The experiments of the Webers were, on the other hand, performed on the small mesenteric arteries of frogs; and the most striking results were obtained, when the diameter of the vessels examined did not exceed from one-seventh to one-seventeenth of a Paris line. When a vessel of this size was exposed to the electric stream, its diameter in from five to ten seconds became one-third less, and the area of its section about one-half. On continuing the stimulus, the narrowing gradually increased, until the caliber of the tube became from three to six times smaller than it was at first, so that only a single row of blood corpuscles could pass along it at once; and eventually the vesssel became completely closed, and the current of blood arrested. When the experiment was so conducted that only a limited part of an artery was exposed to the electric stream, the extent of tube involved in the contraction was equally limited, not exceeding from one-eighth of a line to a line. The contraction did not ensue the moment the irritation was applied, and it continued for a short time after its withdrawal. The walls of the artery were rendered somewhat thicker at the contracted part, but the narrowing of the canal was proportionally greater than the increase in thickness acquired by the walls. Previous to the complete closure of the artery, the velocity of the stream of blood passing through it, in accordance with hydraulic principles, became considerably accelerated. When an artery was irritated only for a short time, or by a feeble galvanic current, it speedily resumed its former caliber on the stimulus being withdrawn, and again contracted on a re-application of it; but when the irritation was long-continued, or the stream very powerful, the portion of the artery narrowed by it lost the power of again contracting, and even dilated until it became double its former size, forming a kind of aneurism on the trunk of the vessel. When the abdominal aorta and other large arteries were experimented on in the above manner, no decided appearance of contraction ensued, a result agreeing with the observations of the experimenters before alluded to. The electric current produced no contraction of the capillaries, and only a slight one of the small mesenteric veins. One other remarkable circumstance observed in the Webers' experiments may, though out of place, be here mentioned, on account of its novelty and

importance; and that is, the speedy arrest and subsequent coagulation of the blood in the vessels, especially the capillaries, exposed to the influence of the electro-magnetic stream. The blood corpuscles adhered unusually to each other and to the walls of the vessels, and by the greater amount of friction thus produced they became retarded in their onward movement, and eventually arrested.

PATHOLOGY AND PRACTICAL MEDICINE.

Scirrhus of the Pancreas. By Dr. Lees, (*Proceedings of the Dublin Path. Soc. in Dub. Jour. of Med. Sci.*)—A man, aged 65, was admitted into Meath Hospital, in a moribund condition—laboring under jaundice—skin of a yellowish green hue, he complained of pain in the right hypochrondriac and epigrastic regions, where a general enlargement was observed extending as low as the umbilicus, slightly tender to the touch; vomiting and hiccough were present, and the bowels were constipated; there was no ascites or pain in the shoulder. The patient had not been addicted to drinking—but had supposed himself, for the last six months, the subject of dyspepsia, jaundice had existed three weeks, and soon after the pain set in, in the side. The patient died soon after his admission into the hospital. *Autopsy*, the liver was greatly increased in size and contained an isolated scirrhous tubercle, the gall-bladder was enormously distended, so much as to extend into the right lumbar region in front of the kidney. The head of the pancreas was greatly enlarged and converted into a scirrhous mass; it was intimately united to the concavity of the duodenum. The common duct was very much dilated. During the whole period of his illness there was no appearance of salivation; this is a point worthy of observation, as the occurrence of profuse salivation has been laid down as characteristic of disease of the pancreas.

Contagious Nature of Porrigo Capitis. By Dr. Nelligan, (*Dublin Jour. of Med. Sci.*—Porrigo capitis is a contagious disease, the vegetable being propagated by the *mycelia*. Its contagious character has been denied by many, on the ground of the rarity of the disease, and the failure to produce it by inoculation, as tried by Gruby and others; the former of whom only produced the disease once out of seventy-six trials on vegetables, and not at all on animals. But Remak succeeded in inoculating his own arm in August, 1842; and Bennett, who had previously failed in his own person after repeated trials, succeeded completely in 1845, in producing the disease in one of his class by inoculation and close contact of the favous crusts, obtained from the head of a boy at that time in the Royal Infirmary. An account of his experiment, and also of Remak's, will be found in the Northern Journal of Medicine for September, 1845, p. 202. Now in all these trials to generate the plant, one important fact connected with the natural history of parasitical fungi has been overlooked by all, namely, *that they require for their growth a peculiar soil;* thus we find one genus is only found on snow, another on cheese, another on yest, different decaying vegetable matters, and individual genera and species on various living animals and plants; nay, even different sorts on different parts of the same animal. This holds true with the Achorion Schonleinii; it requires for its reproduction to be planted in a peculiar soil, that is, on an individual whose system is in a peculiar cachectic condition; and until it is ascertained what this exact constitution is, a single instance of its propagation by contact—and such instances are not uncommon—must be held as sufficient proof of its contagious character.

On the Use of Solution of Caustic Potash in relieving Strangury. By R. Mulock, M. D.—In three cases of strangury, caused by blistering with cantharides, I found the solution of caustic potash a perfect remedy. Two of the cases were head affections, where opium was inadmissible. Thirty drops, given in half a wine-glass of water every hour, gave relief before the third dose was exhibited. What led me to the use of this preparation was its known effects in relieving irritation of the bladder in other cases, and also its efficacy in relieving the stings of wasps or bees when applied to the skin. I considered that it might also relieve the acrid principle of the cantharides. Indeed from its effects, it would probably be a remedy for an overdose of that medicine, if given in proper time. In looking over the various works on irritative poisons, I find no antidote to the poison of cantharides, and mention this now that further trial may be made of its effects in giving relief.—*Dub. Jour. Med. Sci.*

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Pathology of Intermittent Diseases.—Dr. Amand Beaupoil has just published in the *Gazette Medicalé*, an extremely interesting paper, wherein is treated the disputed question of the localization of intermittent fever. It would give us pleasure to analyze this dissertation fully, for it is worthy of notice, but we are obliged, for want of space, to confine ourselves to the conclusions:—1. The seat of the intermittent phenomena cannot be placed in any organ or system of organs to the exclusion of others. 2. The intermittent may become connected with any other affection, and form with it a sort of unity or special morbid entity; the disulphate of quinine is a specific for this compound intermittence, as well as for simple ague. 3. Intermittence is often combined with an organic affection, in the manner of complication; it behooves us then, to administer the specific remedy simultaneously with the means indicated by the organic lesion. The treatment ought, in fact, to be double. 4. When the intermittence is independent of any organo-pathological modification, it seems to affect the sensitive portion of the nervous system especially; there appears to be an exaggeration of the physiological rhythm of organic contraction and expansion, and this state produces an alteration in the amount and variations of animal heat, and constitutes intermittent fever. 5. It will, then, be seen that ague may be simple, compound or complicated. 6. The intermittent phenomena may be attributed to the effect of miasmata on the economy; the noxious emanations being modified by periodic alternations of heat and cold, of dryness and humidity, of light and darkness, of sleep and waking, and of all influences which act in the same way. 7. The nervous element evidently plays an important part in the production of intermittence, brought on by the causes just mentioned; it seems, indeed, that the influence of this nervous element is altogether indispensable. 8. Enlargement of the spleen is the *effect*, and not the *cause*, of intermittent fever; it is an indication for large doses of quinine.—*Lancet.*

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On the Internal Use of Turpentine Oil in Cases of Hemorrhage. By L. Percy, M. D. (*Lon. Med. Gaz.*)—The author, after noticing the fact that several writers—Adair, Nichol, Johnson, Warneck, Copland, Ashwell, and Pereira—have spoken of the efficacy of the essential oil of turpentine in hemorrhagic diseases, observes that this remedy seems nevertheless to be little used by practitioners. In the cases in which he first made trial of it, hæmaturia of two years' standing, in an old man of eighty, was stopped in twenty-four hours by eight drops of oil of turpentine, and did not return. He has since used it in different cases of hemorrhage, and always with a favorable result. The cases in which its use is indicated are those of passive hemorrhage. It must not be employed in cases where there is an active determination of blood, and where the pulse is full. When the discharge of blood is the consequence of organic disease, as of disease of the uterus, or of tubercular disease of the

lungs, the action of the remedy is not so efficacious; but the author has seen a case of scirrhus of the womb, in which the hemorrhage was for some time stopped by this remedy. The author has found the action of turpentine oil very rapid, an effect being manifest in a few hours, often after one small dose. In order better to ascertain its power, he used it alone, without having recourse to local astringents or cold applications, where he could do so without fear of endangering the life of the patient. He has used it most frequently in cases of menorrhagia and epistaxis; but he mentions, that it appears to him to be particularly applicable in the cases of hemorrhage attending typhus. He noticed the fact that turpentine exerts different actions on the body according as it is taken in large or small doses, being more readily absorbed in the latter case; and he remarks, that as its beneficial action in cases of hemorrhage must depend on its being absorbed, the inference would be drawn, that the doses in which it is given in such cases ought to be small. His experience confirms this conclusion. He has always found a dose of from eight to thirty drops sufficient. The best vehicle for it is almond emulsion, with a little gum arabic. When there is pain in the abdomen, a few drops of laudanum may be added.

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On the Diagnostic Value of Expectoration and Pain in Pulmonary Affections. By Prof. Andral.—Let us now inquire into the diagnostic value of expectoration in various maladies.

In acute laryngitis, simple or puriform, mucus may be rejected: when a certain quantity of pus is suddenly thrown up, it points to a submucous abscess of the larynx; false membranes secreted in the larynx may also be seen, as in variola, for instance. In chronic laryngitis, blood, expectorated in small quantities, indicates an ulcer of the mucous membrane; if the amount of blood be at all considerable, its source is not in the larynx. A chronic form of croup has been described in which the patients cough up false membranes, and this circumstance often exercises a most favorable influence upon the progress of the malady. Polypous concretions, and vegetations formed in the laryngeal cavity, have been rejected; also pus from an abscess developed in the organ, as in a case published by Dr. Pravaz, of Lille: a tumor, soft and fluctuating, had been previously recognised by the introduction of the finger, and disappeared after the sudden expectoration of a certain quantity of purulent matter, with which two small concretions were also thrown up. The same author relates in his inaugural thesis a case in which two hydatids were found in the ventricles of the larynx, but we have never ourselves observed any instance of the kind.

Acute bronchitis is not in its first period attended with expectoration; but, as the disease progresses, the cough becomes loose; and a colorless, transparent mucus, more or less viscid in its nature, is rejected, occasionally streaked with blood if the cough be violent. This matter gradually becomes less transparent, and acquires a puriform appearance, decreasing at the same time in abundance, in proportion as the case progresses towards a favorable termination. In some patients the expectoration is puriform from the first, in others it never assumes that character. Occasionally, even the cough is dry from the beginning to the end of the disease. In chronic bronchitis, the expectoration usually consists of a slimy fluid, more or less puriform in appearance: when dyspnœa is present, this matter is very viscid, and generally spumous. It is sometimes constituted by a homogeneous liquid, which bears the greatest resemblance to the expectoration in consumption, from which neither chemistry nor the microscope can distinguish it. The abundance of the rejected fluids may be very considerable, particularly in the aged, the general condition of the system suffering at the same time much less than it would, *à priori*, seem rational to suppose. The odor of the matter is not characteristic, and may accidentally acquire great fetidity. In some cases of

chronic inflammation of the bronchi, no expectoration is observed; in others a peculiarly granular mucus is thrown up, which has a remarkable tendency to solidity; and in both these cases, pulmonary emphysema often follows bronchitis.

During the first two days of pneumonia, characteristic expectoration is seldom noticed, but after this period the rejected matter is viscid, transparent, spumous, and rusty in color; as the disease advances the fluid becomes darker and less frothy, and gradually resumes its natural hue if the malady terminate favorably; if, on the contrary, it becomes darker and more viscid, or brown and more fluid, the prognosis acquires greater gravity. It has been often said that where the color of the expectoration resembled that of the juice of stewed prunes, the circumstance indicated diffused suppuration of the lung; we believe that it points more to increased severity of the case than to that particular fact. In the aged, the expectoration is often of a reddish gray, and may completely be suspended some time before a fatal issue, either from a real cessation of the morbid secretion, or more frequently from loss of power to reject it. In the pneumonia of children no expectoration takes place, and when this disease is a complication of other ailments, consumption for instance, the rejected matter is often deprived of its characteristic appearances. M. Remak, of Berlin, states ("Archives," January, 1846,) that in the expectoration of pneumonia, small concretions are rejected, constituted by fibrine, and incarcerating purulent corpuscles in their network; the shape of these concretions is the same as that of the bronchi: we have several times assured ourselves of the accuracy of this observation, which may assist considerably the diagnosis of doubtful cases. Chronic pneumonia presents no special expectoration.

Œdema pulmonis and emphysema are not attended with any characteristic appearances in this respect. At the beginning of attacks of asthma, the expectoration is usually suppressed, and returns at the close of the paroxysms. Pulmonary apoplexy usually causes hemorrhage and the rejection of a small quantity of blood, but not constantly. In gangrene of the lung, the sputa are thin, dark, and extremely fetid.

Pulmonary consumption at its various periods occasions an expectoration, the characters of which it is important to be well acquainted with. Mucus, pus, blood, concretions, &c., may be rejected, and their relative significations should be clearly understood. During the first period of phthisis, the cough is frequently dry, or followed merely by the expulsion of pure mucus; blood is often rejected at this period, with the characters which we have elsewhere described. Calculi, also, may be expectorated, formed of crude tubercular matter. When softening occurs, the appearances are usually those observed in bronchitis, the sputa being sometimes streaked with a substance of a yellowish, dead-white color, supposed to consist of detached tubercular secretion: also, occasionally granular agglomerations of tubercle are found floating in the mucus; hæmoptysis may occur at this stage; but when cavities have formed in the lung the appearances are more characteristic. A large tubercular mass may be expelled suddenly, but in general its elimination is gradual. The discharge is thus formed of three parts, viz.: bronchial mucus, tubercular matter, and a purulent fluid secreted by the walls of the accidental cavity. According to the relative proportions of these three elements the expectoration varies in its characters. In most subjects it separates into two layers—a semi-transparent, gummy fluid, and a more opaque, solid matter. The latter may be suspended in flakes, or float on the surface of the fluid in small round patches (nummular expectoration.) At a still later period of the disease, the semi-transparent matter is no more to be found, and the matter consists merely of a thick, purulent fluid. At this stage of phthisis, hæmoptysis is more rare than in the first periods. The odor or taste of the expectoration are not characteristic, in spite of the Hippocratic aphorism, that in consumption it is at first salt, and afterwards sweetish. The quantity rejected varies greatly, not only in several, but even in the same individual. Shortly before a

fatal termination the expectoration may be suppressed, or become looser from the enlargement of the caverns. Microscopic examination shows in the sputa of consumption the presence of pus and blood corpuscles, of epithelium, of false membranes, and of pulmonary tissue. When a piece of tubercular lung is examined with the microscope numerous corpuscles can be seen, with the particular form described in the first series of these lectures. But it is very uncommon to meet with these special granulations in the sputa, being, as it would seem, dissociated before they are expelled from the chest by the efforts of coughing. It has been said, and it is quite true, that tubercular sputa sink in water, and burn with a flame when desiccated; but these characters cannot distinguish them from the sputa of bronchitis, because they result from the presence of pus, which may exist in one disease as well as in the other.

When hydatids form in the pulmonary organs, they may be expelled by expectoration. The sputa of cancer of the lung are said to resemble gooseberry jam in color and consistency, but this fact requires further confirmation.

In diseases of the pleura, the expectoration is usually absent, or resembles that of bronchitis; but pleuritic effusions may suddenly be discharged by the bronchi, after ulceration of the surface of the lung. True pus is thus rejected, and penetration of air into the pleuritic cavity soon communicates to its contents a fetid alliaceous odor. The consecutive discharge may continue for a considerable time, and may be recalled after temporary cessation by change of position of the subject, by which a change is also effected in the relative situations of the pleuritic effusion and of the pulmonary fistula. Even after long duration these cases are susceptible of recovery.

In diseases of the pulmonary organs, the sensibility of the patient may be modified, and furnish signs for the diagnosis.

Many acute or chronic diseases of the larynx may exist without pain, and present a striking contrast between the great change of the voice and the total absence of suffering. When pain accompanies ulcers of the larynx, it is more marked when the sore occupies the vocal chords, or is situated above them, than when it is placed before the ventricles. Affections of the trachea are seldom painful. Acute bronchitis is usually attended with a distressing sense of heat within the chest, which increases with the cough, or with the inspiration of cold air. This pain may occupy the sternal region, or be complained of between the shoulders. Pneumonia, like other inflammations of parenchymatous organs, is seldom of itself a painful disease. "Pulmonum inflammatio," says Boerhaave, "plus affert periculi quam doloris;" a perfectly accurate remark, the stitch in the side, which so usually accompanies pneumonia, being in most cases due to pleuritic complication. Many consumptive patients suffer very little, others, on the contrary, are frequently troubled with pain, due to the participation of the pleura in the disorder—a fact demonstrated by the adhesions found within the thorax of these subjects on *post-mortem* examination.

Some patients feel a sort of tightness round the chest, and are fully aware, from the nature of the sensation, that their respiration is not complete; in others a sense of uneasiness is complained of in the superior part of the chest; and in these cases, on dissection, caverns are often found in these regions, separated from the pleura by very thin walls. Occasionally percussion of the chest, and even auscultation with the stethoscope, cause pain in phthisis. Pain between the shoulders is very generally looked upon as a sign of consumption; we believe that the importance of this symptom has been much overrated; it seems to us to be merely a muscular pain, due to debility, and observable in most cases of chronic disease; it is, for instance, almost constant in chlorosis. Hydatids and cancer of the respiratory organs are productive of suffering only when the pleura is affected. Acute pleuritis seldom exists without pain; its intensity is variable from a trifling to a most intense stitch in the side. It is usually seated below the breast on the affected side, and increased by motion, pressure, cough, or inspiration. It may extend to the whole thoracic wall, or be limited to the cartilaginous edges of the ribs; in diaphragmatic pleurisy, it spreads to the epigastrium, and even to the abdominal parietes.

An ingenious explanation of this pain has been offered by Dr. Beau, and seems confirmed by anatomical investigation. That gentleman attributes it to inflammation of the intercostal nerves, which, in the posterior third of their course, lie in close apposition with the pleura. Irritation of a nerve, causing pain to be felt in the region of its terminal distribution, excitement of the posterior part of these nerves in pleurisy, naturally occasions a suffering which is referred to the anterior region of the thorax, immediately below the breast.—*Jour. Med. Times. Reported by Dr. McCarthy, Paris.*

Statistical Researches in Chorea.—Dr. Easelmann, after collecting reports of cases from different authors, and adding to them his own, finds that females are much more prone to chorea than males, in the proportion of 73 to 27 in 100 cases. Up to the age of 11, of 33 patients, 22 were girls, 11 boys; from 11 to 15 years of age, of 45 cases, 34 were females, and but 11 males; about 15 years old, of 22 patients, 17 were women, and only 5 men.

Thus, whilst the proportion of males remains the same before and after the age of 10, the proportion of females increases remarkably from the 10th to the 16th years; a fact which leads to the conviction that the period of puberty exercises a great influence on the development of the disease.

Respecting the causes of chorea, fright is the most common. Thus in 100 cases, 31 were referable to this cause. Next in the category, rheumatism appears to be a not uncommon cause, eight cases in 100 being traced to it. In 42 instances, the exciting cause could not be arrived at.

The interval elapsing between the operation of the exciting cause and the onset of the morbid phenomena was not noted in 74 cases. In 8, the chorea manifested itself immediately; in 13, after a week; and in 5, after two weeks or more.

Of the success of remedies used, purgatives alone, or combined with diet, were successful in 6 cases, and of benefit in another; 2 cures are referred to rhubarb administered in port wine; arsenic was employed in 7 cases, in two with success; iron in 29, effecting a cure in 19, and benefiting in two cases; zinc, in the form of sulphate chiefly, effected a cure in 45, and improved the state of two others. Quinine, gentian, chamomile, and nux vomica were tried in nine instances, and cured in three. Antiphlogistics were used with three patients, curing two, and relieving a third. Electricity has proved of great service in old and rebellious cases, chiefly in young women in whom the chorea had an hysterical character, and in children, where the disease was not dependent on irritation; nine cases of cure out of 15 are attributed to this agent, but in five of those nine cases, oxide of zinc and carbonate of iron were conjoined in the treatment. Affusion has also succeeded, but not to such an extent as electricity.

In fine, of the 100 cases, 80 were cured, seven nearly cured, ten relieved more or less, and three died. The duration of treatment was for three weeks in 24 cases, from three to six weeks in 40, from six to eight weeks in 23 cases, and from two to three months in 13 other instances.—*London Lancet.*

SURGERY.

Dislocation of the Head of the Femur backwards—Death—Dissection of the Parts; with some Observations on that form of Dislocation. By Richard Quain. (*Lon. Med. Gaz.*)—An opportunity having occurred to the author of making a dissection of the parts concerned in a recent case of dislocation of the femur, he availed himself of it, and has embodied his observations in this communication to the society. The subject of the injury, a man aged 60, was killed by a fall from a ladder, the cause of death being extensive fracture through the base of the scull. Considerable deformity being observed in the right lower limb, the author was induced to make a careful examination of the extremity, with a view to detect the nature of the injury it had sustained. It was appa-

rently, but not really, much shortened; it was also inverted, and separated from the sound limb. The trochanter major was altered in its relation to the iliac spine, and the depression behind it was wanting: the head of the femur could be felt towards the back of the pelvis. The limb could be flexed, but not rotated outwards. On removing the glutæus maximus, the head of the dislocated bone was exposed below the pyriform muscle, and immediately behind the acetabulum. The pelvis had sustained a fracture, but the fragments were not altered in their relation to each other. The obturator externus, quadratus femoris, and some deep fibres of the glutæus medius, were torn through. The inner and lower part of the capsular ligament was separated from the neck of the femur, and the round ligament was torn from the depression on its head. The great sciatic nerve was stretched but not injured, as were also the obturator internus and gemelli muscles. The brim of the acetabulum was slightly fractured. After giving the above details, the author remarked that there are points of contrast between the present and other cases which have been recorded of a similar accident; and proceeded to quote the history of the dissection in a few instances of the form of dislocation in question. The first was a case from Sir A. Cooper's "Treatise on Dislocations;" the second, one reported by Dr. Scott in the third volume of the "Dublin Hospital Reports;" and a third, described by M. Billard, in the third volume of the "Archives Générales de Médecine." He then proceeded to comment on these cases, directing attention particularly to the following points:—1st, the condition of the structures immediately interested in the dislocation, and especially the exact position of the femur; 2dly, the characteristic signs of the displacement; and 3dly, the restoration of the bone to the natural position. The practical inferences drawn by the author from the foregoing observations, may be summed up as follows:—1st. In the ordinary form of dislocation backwards, the femur does not reach the sciatic notch. 2d. The head of the bone is lodged immediately behind the acetabulum, over the base of the ischiatic spine, and opposite to a small part of the sciatic foramina. 3d. The injury would be correctly named the dislocation of the head of the femur backwards. 4th. During the extension made to reduce this dislocation, the thigh is most advantageously directed across the pelvis, so that it shall form a right angle, or nearly a right angle with the abdomen. At the same time the limb is to be in a state of abduction; the femur will thus be drawn away from the pelvis, forwards and outwards. The knee is to be bent, the extending force being fixed above the joint.

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On Petit's Operation (the operation without opening the sac) for Strangulated Hernia. By James Luke.—(*London Lancet.*)—The object of the author in this communication was to place before the profession the result of his experience in operating for strangulated hernia, without opening the sac. He remarked, that though experience was the only fair test by which the relative merits of this and the ordinary operation could be decided, the subject was encompassed by many obstacles, such as the impossibility of obtaining exactly parallel cases, the importance of not mixing the observations of different surgeons, or judging from selected cases. To obviate these difficulties and sources of fallacy, the author has yielded up the whole of his experience on the subject of Petit's operation, which is the only mode of operating he has adopted since the year 1841, as an ordinary practice. Being unable to supply from his own case-book the result of cases operated on by opening the sac, the author appealed to the experience of others, referring especially to statistical details given by M. Texter, Mr. South, M. Malgaigne, and collected at the London Hospital, and from the British journals generally, which gave a return of mortality of from one-third to more than one-half. Where the taxis is successful similar statistics prove that a fatal result is very rare. The conclusion which seems naturally to flow from these facts is, that operative inteference should be deferred, and the taxis pursued as long as it offers any prospect of a successful

issue—an interference, however, which the author considers to be fallacious and mischievous in its tendency, as involving rife source of procrastination, which in itself is the too frequent cause of non-success, attending the operation. This assertion is borne out by statistical details of cases operated on at different periods, after the establishment of symptoms of strangulation. The author then proceeded to remark that the desideratum appeared to be, the introduction of an operation by which the taxis would be aided, but without incurring the risk attending the ordinary operation, by exposure of the contents of the hernial sac; and these objects he considered to be fulfilled by Petit's operation. Inclusive of selected cases occurring between 1831 and 1841, the author stated that he had attempted the performance of Petit's operation in eighty-two instances, which, with four exceptions, likewise comprised all the cases that had come under his care since 1841. Of this number the operation was completed, without opening the sac, in fifty-seven. In twenty-five it was necessary to open the sac to complete a reduction of the hernial contents—the opening varying in extent from half an inch to one inch and a quarter. With respect to the mortality amongst these patients—of the fifty-seven in whom the sac remained unopened, seven died; of the twenty-five in whom the sac was opened, eight died. The author considered, however, that for statistical purposes, it was preferable to exclude the selected cases, (twenty-six in number,) together with four other patients, of whom three were considered moribund at the time the operation was performed, and the fourth died from secondary stricture, six weeks afterwards. Of the remaining fifty-two patients, the sac was opened in twenty-one, of which three died, and not opened in thirty-one, of which two died. Of the cases in which the sac was opened, in ten, strangulation of the contents had existed, before the operation was performed, under twenty-four hours, of which number one died; in eight, above forty-eight hours, of which one died. Of the unopened cases, the strangulation had existed in thirteen under twenty-four hours, of which not one died; in eleven, under forty-six hours, of which one died. The author considered it important that the small size of the opening made into the sac, in the former class of cases, should be borne in mind, as it doubtless had an important influence in diminishing the ratio of mortality attached to this mode of operating. He then passed on to further details relating to the above cases and the reason for opening the sac, and stated that of the fifty-two instances cited, twenty-nine were femoral, twenty inguinal, and three were umbilical hernia. He further pointed out the conclusion, from an analysis of the foregoing cases, that Petit's operation has proved most successful in the femoral form of hernia. In cases of inguinal hernia, the author limits his incision to a longitudinal division of the skin and fascia over the neck of the sac, of which cut the seat of stricture should be the centre. He then partially incises or scarifies the neck of the sac, (if the seat of stricture, as it usually is,) so as only partially to divide it, and so that it shall yield to the subsequent application of the taxis. In femoral hernia, he considers it very desirable to avoid, as much as possible, interfering with the tumor in conducting the operation, and therefore recommends that a similar proceeding should be adopted—the centre of the perpendicular incision in this case being between the upper part of the tumor and the abdominal surface. Poupart's ligament is thus reached by carrying the finger from above downwards, and the stricture is divided on a director, introduced into the femoral ring. The operation advocated by the author is not considered by him to be so applicable in umbilical hernia, except where it is of small dimensions. The author concluded by noticing and combatting the various objections which have been raised to Petit's operation, and by insisting on its value, apart from other considerations, as holding out inducement to surgeons to proceed with less delay to the performance of the operation, as he considered that procrastination, arising from the dread of having recourse to the more severe operative interference ordinarily adopted, was in itself, (as already remarked) a rife cause of the mortality which unhappily has too generally attended these cases.

Amputation—Inhalation of Chloroform—Death.—M. Robert, surgeon of the "Hôpital Beaujon," Paris, reports the following case: "A young man, tweny-one years of age, was admitted, on the 25th of June last, into the 'Hôpital Beaujon,' for a severe fracture of the shaft of the femur, caused by a ball which had traversed the limb from before backwards. Disarticulation of the thigh was decided upon. The patient was put under the influence of chloroform by means of the apparatus, divided by a spiroid diaphragm made of netting, and provided with a large mouth-piece; the nose was secured by an assistant. In three or four minutes there were a few convulsive movements pointing to the period of excitement, and soon after a complete state of relaxation came on. A large anterior flap was then made, beginning three fingers' breadth below the anterior superior spine of the ilium; hardly any blood was lost. The patient at this moment awoke, and M. Robert desired that more chloroform should be given, and continued the operation. Hardly had a quarter of a minute elapsed, than a loud stertorous breathing was heard, and the apparatus was withdrawn. The patient's face was extremely pale, lips blanched, and the eyes, the pupils of which were greatly dilated, were drawn so high upwards as to be hidden by the upper lid. The operation was immediately suspended. The pulse at that time was hardly perceptible, all the limbs were in a state of complete relaxation, and the breathing was heard at long intervals. Frictions, irritation of the pituitary membrane, forced movements of the arms and of the ribs, were resorted to; several times the respiration seemed to become more vigorous, and the pulse more distinct, but this was but a momentary improvement, and it was but too apparent, after three-quarters of an hour of incessant efforts on the parts of the persons present, that the patient had ceased to exist. The sudden paleness of the skin, the annihilation of the pulse, evidently pointed to syncope; and as the latter cannot be ascribed either to hemorrhage or a protracted operation, it must be concluded that syncope was the immediate result of the inhalations of chloroform; the more so, as none of the symptoms of the admission of air into the veins were present. The special kind of wound which the patient had received, as well as the stupor and shock consequent upon it, should, at the same time, be taken into consideration, beside the deep dejection and despair in which he was plunged."

After some discussion, it was decided in the Académie de Médecine that this case should be referred to a committee which is to present a report on ether.—*London Lancet.*

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Case of Resection of the Scapula. By Prof. Fergusson, (*London Medical Gaz.*)—W. H——, aged 33, was admitted into King's College Hospital, on January 13th, 1847. He had suffered from disease of the right shoulder-joint for seven years, when the extremity was amputated at the articulation, at Fort Pitt Hospital, and a part of the glenoid cavity was at the same time removed. He recovered, but became the subject of abscess on the front of the chest about twelve months afterwards. On admission into King's College Hospital, the whole shoulder was enlarged, and the soft tissues hypertrophied; a great many fistulous openings existed in the pectoral region, and over the clavicle, which discharged copiously. Having determined on the propriety of removing the scapula entire, the author proceeded to operate on the 6th of February, 1847. The patient was put under the influence of ether, and the clavicle was first exposed, and divided about two inches from its acromial extremity with a saw; another incision extended along the spine of the scapula, and a third in the course of the old cicatrix. Some further dissection, and a division of the attaching muscles, enabled the operator to complete the excision, the subclavian artery being the while compressed over the first rib. The axillary and other arteries were tied, and the wound closed with stitches. The patient's recovery was satisfactory, and unattended by anything deserving

particular notice. On May 5th, he was sent into the country, and a recent account reports him to be well and fat, though still occasionally troubled with small abscesses on the breast. After maceration, the bone exhibited a hypertrophied condition; the remaining portion of the glenoid cavity was carious, and its margin was surrounded by a mass of new ossific matter. The author concluded with some observations on the interest attaching to the case, from the rarity and formidable character of the operation required for the relief of the disease, and its successful issue.

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Tetanus, (*Dublin Jour. of Med. Sci.*)—Mr. Wilmot sums up a very elaborate paper on tetanus in this Journal for August, with the following propositions.

1st. That tetanus depends on irritation, directly or indirectly, of the excito-motory system, or true spinal cord, by which it becomes surcharged with motor influence; and that inflammation in or about the cord, or any appreciable lesion, is not an essential condition for the development of the disease.

2d. That while we have ample evidence, physiological and practical, that opium is ill-calculated to fulfil the indication in tetanus, namely to diminish the excitability of the true spinal cord, until our views become improved, and the knowledge of an anti-tetanic agent ceases to be a *desideratum*, we are not justified in discarding altogether this drug.

3d. That our grand object in the treatment of tetanus should be, to support the patient's strength by the administration of stimulants and strong nourishment, with a view, as it were, to compensate the vital powers for their great exhaustion consequent upon the expenditure of force by the violent muscular contractions, which in some cases are excessive.

4th. That as the removal of the exciting cause, once the first evidence that irritation has been propagated to the spinal cord becomes manifest, does not in the least degree check the progress of tetanus, or abate the violence of its symptoms, all operations, in traumatic cases, are generally not only unnecessary but injurious.

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On the Value of the different Modes of Treatment of Primary Syphilis. By B. Philips. (*Med. Gaz.*)—Mr. Philips, Surgeon to the Westminster Hospital, after giving the opinions of different writers on the value which ought to be attached to certain methods of treatment of primary syphilis, concludes by saying—

We must, then, fairly admit that the published documents do not enable us to determine—first, whether primary syphilis gets well more rapidly under one plan of treatment than another; secondly, whether secondary symptoms follow with more frequency upon one plan of treatment than another; nor, when they occur, how they are best treated; and I have no unpublished data by which the question may be resolved.

I have not largely tried the non-mercurial system among the out-patients of this hospital. To the extent I have gone, the results have been unsatisfactory; but this no doubt may be owing to the difficulty of carrying out the anti-phlogistic plan among this class of people.

With respect to the mercurial plan of treatment, I have notes of 103 cases in which it was employed. The whole time during which the patients were under treatment was 3,432 days, or nearly 34 days for each patient; but then it should be mentioned that the treatment was continued until the induration had disappeared. I am not able to state accurately the number of instances in which secondary symptoms occurred. Many of the cases I totally lost sight of; but I know of five of those cases in which secondary symptoms were developed.

This evidence is obviously unsatisfactory; and I know no where else to which we can look for the solution of our difficulties than to army surgeons, who have the means of setting these several questions at rest within the next five years, and thus conferring a very real benefit upon science, by removing all doubts on the subject, and proving what plan of treatment is best. They have the patients under their immediate authority; the plan they follow will be unquestioned; and, after having ascertained the average duration of treatment of the primary symptoms under each plan—they may have the patients under their own observation—it may be for years afterwards, so as to ascertain how frequently secondary symptoms are manifested, and what is their relative severity. Until this is done we can only express the opinion we entertain—not certain, however, that it is correct, but believing it to be so—that, of all plans of treatment of primary syphilis, a mercurial one is best; that under it, when discreetly employed, the symptoms are soonest extinguished; that secondary symptoms are less frequent; and, when they occur, are not more severe than when any other plan of treatment is followed.

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On Division of the Falciform Border of the Fascia Lata, for Varix of the Saphena Vein. By W. B. Herapath, (*Provincial Med. and Surg Jour.*—Setting aside the various known causes productive of varicose veins in the lower extremities; it appears to us that there is one which has hitherto escaped the attention of surgical writers, one also that admits of an easy remedy. Varix has been too generally thought to depend upon an imperfect condition of the valves of the venous trunks; but if pressure exist upon the vein at any point intermediate between its radicles and the right side of the heart, distention of the distal portion will be produced to such a degree, that the valves can no longer close the dilated vein; in this may consist another cause of varix. The superficial cutaneous veins are more commonly affected. These are the internal and external saphena, both of which have to pass through apertures in the deep fascia, in order to reach the large trunks. Now, should these apertures at any time be two small to allow the passage of the blood carried by the veins, distention must ensue, and varix result. The operations hitherto adopted for the removal of a varicose state of the saphena relieve by *obliteration* of the veins; consequently advantage is taken of anastomotic communications, and the circulating current is sent into other trunks. The plan which we propose is a simple division of the falciform border of the fascia lata, which plan has been tested successfully by repeated experiment and cases; it restores the circulation in the natural direction, by removing the cause. It is an operation devoid of danger when carefully performed and therefore when applicable (which is not the case in the varix of the popliteal vein) presents additional advantages over those hitherto proposed.

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On the Treatment of Fractures of the Thigh-Bone in Infants, in the flexed Position. By E. F. Lonsdale. (*Med. Gaz.*)—When fracture of the thigh-bone occurs in infants or in very young children, it is by no means an easy matter to prevent shortening of the limb, owing to the difficulty of maintaining the correct apposition of the two portions of bone. This difficulty all surgeons of any experience in the treatment of fractures must have met with. My attention has been more particularly directed to the subject lately, from many cases having come under my care at the Orthopædic Hospital, as well as two in private practice, the children having been brought for the treatment of existing lameness, in all of which there was shortening of one limb, owing to the thigh-bone having been fractured at a former period, and to the want of proper care in preserving the correct apposition of the bone during the treatment. On examining the limb carefully, the cause of the shortening was found to be owing to the extreme curve forwards of the shaft of the femur, and not to the lower por-

tion being drawn up behind the upper (which is generally the cause of the shortening in adults.) The result, however, is the same—namely, the approximation of the knee to the hip-joint, and a consequent diminution in the length of the whole limb.

The cause of this increased arch in the bone depends on the difficulty of keeping the upper end from tilting upwards, and of bringing the lower portion into the same line with it. The bone then unites in an angle, causing the whole thigh to appear curved forwards; for in the majority of cases, as already stated, there is no retraction of one portion behind the other. In adults this evil is guarded against by the employment of the inclined plane; but in infants or very young children this apparatus cannot be employed, for there is the absence of sufficient weight in the pelvis and body, as well as the difficulty, if not impossibility, of keeping the child in the horizontal position—points essential to secure its action, and to preserve the correct line of apposition of the two portions of bone.

The treatment generally followed for these cases, and the one that I have hitherto employed myself, is to keep the limb in the extended position, by using long lath splints, extending from the hip down to the foot. (I am convinced that short ones, applied to the thigh only, cannot keep the ends of the bone in apposition.) The splint in the front should be the longest, and be made to pass up before the hip-joint as high as the crest of the ilium. A thick pad is placed on the upper portion of the thigh-bone. Great pressure, however, is required to insure the effectual action of the splints, as well as the necessity of keeping the child in the horizontal position, a position that is difficult and irksome in infants, more particularly during nursing.

Meeting with these difficulties, I turned my attention to the possibility of treating these cases by the flexed position, and have been enabled to do so by the following simple means, which, in the case of a child twelve months old, recently under my care, answered most satisfactorily; the correct apposition of the ends of the bone being preserved at the same time that the position of the child was less constrained and awkward.

I employ two narrow long strips of sheet iron, an inch wide, and thin enough to allow of being easily bent at any angle required, though sufficiently thick to bear the weight of the limb without yielding. They are applied as follows: The child is placed on its back, and an assistant holds the limb in a position so as to flex the hip and knee-joints, the angle of flexion being similar to that employed when the inclined plane is used for adults. The two thin iron splints are then bent at angles corresponding to the hip, knee, and ankle-joints, to adapt themselves to the limb, in the position in which it is being held by the assistant. An important point to attend to is, the proper length of the splint. The upper one should be long enough to pass up in front of the hip-joint, to lie flat on the lower part of the abdomen, and to extend down over the instep to the toes. The back one should extend up behind the buttock, being curved to fit its shape, as high as the posterior margin of the crest of the ilium, and long enough to extend down behind the heel to the sole of the foot. If the two splints are bent at proper angles, to correspond with the shape and position of the hip, knee, and ankle-joints, they will, when firmly bound to the limb, keep it in the position required, which is one that most favors the correct apposition of the ends of the bone, by relaxing all the muscles. The limb must of course be evenly rolled before applying the splints, and the splints themselves be padded. The upper ends of the splints are to be firmly fixed to the pelvis, by passing the bandage many times round them, and occasionally reversing the direction of the bandage round the ends of the splints themselves, to prevent them being displaced laterally.

On Amputation and Local and General Etherization in Traumatic Tetanus. By M. Roux, (*Med. Gaz. Sept. 1st.*)—"If tetanus be caused by a wound, we must not hesitate to amputate immediately."—*Larrey, Chir. Milit.*, t. i. p. 260.

"Experience has long banished from my mind all doubt as to the alleged efficacy of amputation in these cases."—*Dupuytren, Clin. Chir.*, t. ii. 609.

I. *On amputation in traumatic tetanus.*

Struck with the inefficiency of the treatment in the numerous cases of traumatic tetanus which he met with in Egypt, Larrey was induced to combat that so often fatal disease by amputation.

Velpeau, Lisfrance, Blizard Curling and others, have reproduced this idea in their writings; while on the other hand, Boyer, S. Cooper, Dupuytren, Berard and others have combated it.

Others—among whom is M. Baudens—consider that the question, still undecided, can only be settled by experience and a just appreciation of the facts.

I propose to examine this question anew, both in a theoretical and a practical point of view.

While some surgeons have advised amputation in all cases of traumatic tetanus, others, and these comprise a great majority, only amputate when the nature of the wound itself requires the loss of the limb.

The partisans of amputation, considering that the primary cause of tetanus resides in that part of the peripheral nervous system directly modified by the wound, have thought that by the removal of the cause the effect will cease. They found their opinion on the gravity of the disease, on the imminence of the danger leaving no choice, and on the two following considerations: 1. The wounds followed by tetanus are often complicated by the laceration of nerves, and by the presence of unrecognised foreign bodies, effects which are removed by amputation. The reality of this fact has often been demonstrated by the autopsy: of this Dupuytren reports a remarkable example. I have noticed two additional cases, under the case of M. Lallemand, at Montpellier. 2. Amputation being inevitable owing to the gravity of the lesion, the disturbance which it excites is far from inducing the same danger that would exist if it were practised after the cessation of tetanus, which it might then reproduce. In addition, the patient is not exposed to the other results of severe lesions. Finally, six cases of recovery after amputation have been recorded by French surgeons; and out of eleven cases reported by Mr. Blizard Curling, seven recovered. In a case cited by Valentin, tetanus, following an injury to the great toe, which disappeared after amputation, returned before cicatrization was complete.

Many surgeons object to amputation in traumatic tetanus for the following reasons: 1. Traumatic tetanus may have its origin in a nerve affected by a lesion, but once developed it invades and exists in the whole system. 2. Amputation often itself the cause of tetanus, produces disturbance capable of aggravating the disease. 3. The annals of such cases attest that several therapeutical agents have produced more cures than have been obtained by amputation. 4. Finally, amputation is far from always curing traumatic tetanus; Larrey, Dupuytren, and Cloquet, have cited six unsuccessful cases; and S. Cooper three. According to Sir James Macgregor, the English, after the battle of Toulouse, made many unsuccessful attempts to cure tetanus by amputation.

The solution of this question, is without doubt, one of the most difficult in surgery. In my opinion—

1. Amputation is not usually a curative means in tetanus.

2. Amputation will most probably be of service when tetanus supervenes on irregular wounds, complicated with undetected foreign bodies, and with lacerations of nerves.

II. *On etherization in traumatic tetanus.*

The appreciation of the modifications which the organization presents under the influence of tetanus and of etherization, soon led surgeons to oppose those agents which produce insensibility and muscular relaxation to a disease characterized by opposite phenomena, exaltation of sensibility and muscular rigidity.

Recovery from idiopathic tetanus has already resulted from the use of the ether or chloroform in cases treated by MM. Petit, Mignot and Ledru.

Traumatic tetanus, more unyielding to treatment than traumatic, has already yielded several times to anæsthetic agents, since, by these means, Pertusio and T. Hopgood, have obtained successful results. But at other occasions chloroform and ether have proved unserviceable, as in the cases of MM. Velpeau and Ivonneau; indeed these agents appeared to aggravate the disease in the case of one of the wounded of February, cited by M. Robert, and in another case communicated by M. Roux.

In spite of the want of uniformity in the results obtained, some clinical facts authorize a perseverance in the plan of etherizing patients affected with tetanus from physical causes, and of submitting them to repeated etherizations.

In applying the physiological views of reflex movements to traumatic tetanus, I think we are led, not only to etherize the whole system through pulmonary inhalation, but also all wounded surfaces, so as to modify them by local etherization from the immediate application of anæsthetic vapors.

If, as Muller, (Marshall Hall,) and the most eminent physiologists of our time, consider, the theory of reflex movements is applicable in the explanation of tetanic contractions, much light will be thrown on the pathology and therapeutics.

"When," says Muller, (Phys. t. i. p. 609) "sensations which have been produced by external impressions on the sensitive nerves, determine movements in other parts, the effect is never the result of re-action between the sensory and motor fibres of a nerve itself; but it depends upon this, that the sensorial excitement is transmitted to the brain and spinal marrow, and then re-acts on the motor fibres.

"In pathological conditions," he adds, "the strong local excitement of a sentient nerve, may, by the violence of the stimulus transmitted to the brain and spinal marrow, produce convulsions and rigors, as may be seen after the extraction of a tooth. It often happens that the local irritation of nerves from inflammation, or the presence of a tumor, will produce general spasms, and even epilepsy.

"The irritation of the spinal marrow, occasioned by local excitement, may be so severe where there is an extensive injury, as to give rise to continual convulsions. All violent irritation of the spinal marrow, is a tetanus, which may have been excited by narcotic poisons, or by some immediate and local impression. We may easily understand on these principles, the manifestation of traumatic tetanus.

In this form of tetanus the muscular contraction may be caused by two circumstances—first, by an injury to some part of the sensory nervous system; secondly, by the immediate lesion of the motor nervous system.

In the first case, the lesion may exist at the extremity of one or more sentient nerves, in the course of those nerves, or in the posterior or central portion of the spinal marrow. The impression inflicted on the sentient nerves by a wound, is transmitted to the posterior part of the spinal marrow, which re-acts on the motor portion of the spinal marrow; and hence the convulsions and muscular rigidity, the duration of which depends on the permanence and extent of the exciting cause. Things happen nearly in the same manner, and the final result is the same, when there is immediate injury to a sentient nerve, or to the sensitive portion of the spinal marrow.

When, on the other hand, the lesion exciting the tetanus exists in the motor nervous system, it always affects the anterior layers of the spinal marrow, and to an extent in relation with the number of the contracted muscles. The lesion of only one motor nerve, will only excite contractions in the few muscles supplied by it. When a lesion of the motor portion of the spinal marrow excites tetanus, the phenomena are not explained by the laws which regulate the reflex motions.

The primary cause of traumatic tetanus resides in the wound itself, and

may exist either in the extremities or course of the sentient nerves, or in the motor portion of the spinal marrow, or the motor nerves.

Surgeons have acted in instinctive accordance with these principles when they have successfully treated tetanus by such means as the local application of opium and morphia; the division of the lacerated nerves; the extraction of foreign bodies which had wounded the nerves; the division of ligatures which compressed them; the incision of imperfect cicatrices; cauterization; the amputation of the limb, and other modes of procedure.

To the list of successful means I propose to add the direct or local etherization of the wounded surfaces. By this direct etherization and consequent local etherism, I hope to isolate the affected part from the rest of the organism, to render insensible the wounded sentient nerves, so as to unfit them for transmitting morbid impressions, and to arrest the tetanus by preventing the re-action of the sentient upon the motor nervous system. But while this local etherization, (which I accomplish easily by means of my ether apparatus,) ought to be practised on the wounded surfaces, or the lacerated sentient and motor nerves, the anæsthetic vapors ought to be used with judgment, so that the insensibility may be excited to a proper degree, and that the mobility of the part may not be permanently abolished. These precautions will be superfluous, when the surface of an amputated stump, or of the integument denuded by a burn or lacerated wound, shall be subjected to etherization.

M. Longet on Local Etherization.

It results from the experiments of M. Longet, "that a mixed nerve, the sciatic, for instance, exposed in a part of its course, and submitted to the action of the vapor of ether, or of ether itself, becomes insensible, though still excitable, at and below the etherized point.

"In the *first degree* of direct etherization, which appears at the end of half a minute in dogs and rabbits, the nerve, although absolutely insensible at the points indicated, still has the power to excite voluntary motion in the muscles which it controls. In the *second degree* which manifests itself after an immediate etherization somewhat more prolonged (three or four minutes,) the mixed nerve loses the power it possessed in the *first degree:* it is still insensible, and is entirely dispossessed of the faculty of exciting voluntary motion, though its excitability still remains. Finally, in the third degree, which may be observed after the contact of the ether with the nerve of from twelve to fifteen minutes, there is neither sensibility nor voluntary motion in the muscles supplied by the nerve, nor any proof of excitability in the nerve."

The author afterwards makes the important remark, "That the direct etherization of the nervous system may be so conducted as to produce effects sometimes transient, at others lasting. In the first degree, the anæsthesia can only last a few seconds; in the second, the sensory and motor faculties sometimes return in less than twelve hours; finally, in the third degree, the prolonged contact of the ether may alter the intimate composition of the nervous tissue, the faculties of which can only be restored by the regeneration of the tissue itself."

The experiments on the same subject communicated to the Academy of Sciences by M. Serres, and the researches by MM. Pappeinheim and Good, on the structure of nerves which have lost their function under the influence of ether, show the danger of exposing the nerves too long to the action of ether.

In advising direct etherization to wounds, lacerated nerves, and burns, I would confine its action to the first and second degrees pointed out by M. Longet. It is, indeed, advisable not to go so far as the second degree when the nerve to be affected is very large. In such a case the exposure of the wound to the anæsthetic vapors, *repeated at short intervals*, would offer the advantages of continuous etherization without the dangers. Local etherization may be prolonged without danger when it is applied to a superficial wound.

In proposing direct etherization as a local treatment of traumatic tetanus, I do not conceal from myself that that disease soon embraces the whole nervous system, and lessens the chance of success by attacking it at one point only. Local and general etherization ought to be conjoined in such cases with the other successful therapeutical agents.

My confidence in the efficacy of the means I propose is not founded on the treatment of any case of tetanus; nevertheless, experiments which I will relate authorize me in concluding that it is rational, when we employ general etherization in traumatic tetanus, to conjoin with it local etherization.

III. *On amputation and etherism in traumatic tetanus.*

It is probable that the opponents of amputation in traumatic tetanus, even when the lesion itself calls for the loss of the limb, will have modified their opinion since the discovery of chloroform.

Amputation practised during etherization is unaccompanied by any shock to the system, and converts the complicated lesion before existing into a simple wound. Besides this, etherism, producing phenomena the opposite of those of tetanus, opposes with advantage its action to that of the disease.

Every thing leads to the belief that the truth of this principle will be acknowledged. *In traumatic tetanus, where the injury necessitates the loss of the limb, etherism ought to be excited, and amputation performed.*

In a case where tetanus followed an injury to the forefinger, M. Velpeau employed repeated etherization, without amputating. M. Yooneau employed chloroform and ether, without amputation, in vain, in a case of tetanus following a gun-shot wound of the right hand. Both these patients sank, in spite of the repeated employment of chloroform and ether.

In the following case death took place, although amputation was performed and repeated etherization was practised.

CASE.—*Traumatic tetanus—amputation of the leg during etherism—repeated etherization during four days—death.*

9th April, 1848. Joachim Gauthen, a robust man of nervous temperament, was admitted into the Hospital of Marine, at Cherbourg, suffering from fracture of the fibula, with complete dislocation, outwards, of the ankle-joint. There was a small wound over the inner malleolus. The foot was easily replaced. Next morning there was neither swelling in the limb, nor general fever.

On the 12th, heat, redness, and swelling of the limb came on, accompanied by fever. During the next few days he became worse; fœtid discharges came through the wound over the malleolus; and the parts over and within the articulation began to slough.

Incisions were made, and on the 21st the swelling was lessened, but the general condition of the patient was worse: the foot was displaced; the sloughing was extensive; the joint and the tibia exposed; the foot red and œdematous. In addition, he spoke and swallowed with difficulty; and trismus was present.

Amputation was now indispensable, and would have been already performed but for the general reaction, and the great swelling of the upper part of the leg. The immediate amputation of the limb was decided on, the occurrence of tetanus not being considered an obstacle.

In five minutes, unconsciousness was produced by chloroform. The inhalation was continued for three minutes more, until the stiffening of the limbs gave place to complete relaxation; and the leg was amputated, the patient being quite unconscious. The chloroformization was repeated several times during the operation; and the patient was insensible for about eighteen minutes.

After the operation, the trismus was slightly lessened; but the jaws could

only be partially opened. The patient complained of violent pain in the stump. In the course of the day chloroform was administered five times. Each time pain was suspended with consciousness, and the trismus lessened with muscular relaxation. But these effects were only momentary.

Next day the pain was lessened, but the trismus was more pronounced. Poultices, with laudanum, were applied to the wound. Etherization was practised six times in the course of the day. The effect of ether on the patient did not differ from that of chloroform.

On the 23d, opisthotonos was established; but the limbs were still free, except during paroxysms. Ether was given once, and chloroform six times during the day. The ether excited a prolonged rigor, violent cough, and a sense of suffocation. The ether was consequently exchanged for chloroform. During the evening, after the last inhalation, the bronchiæ appeared to be filled with frothy fluid.

On the 24th, the symptoms were not materially modified. Deglutition was more laborious, and was always accompanied by cough and a sense of suffocation, as if each time liquid entered the air-passages. The trismus and opisthotonos were complete and unyielding. He inhaled chloroform thrice during the day. The difficulty of breathing increased, and he became gradually worse. Deglutition was only possible during the short interval of muscular relaxation which followed the inhalation of chloroform.

At midnight he became suddenly worse: the respiration being frequent and embarassed, the pulse rapid, and anxiety increased; convulsions came on; intelligence, hitherto scarcely affected, disappeared; a cold sweat covered the body; and, almost without agony, he died at 1 A. M., on the 25th.

Autopsy 24 hours after death—Complete muscular relaxation, which came on a few hours after death.—The brain and spinal marrow, slightly congested, were in all respects normal. Little blood in the cavities of the heart. Lungs engorged, but crepitating. Mucous membrane of the air-passages, especially in the minute bronchi, of an ineffaceable red. Nothing remarkable was observed elsewhere.

In this case, the anæsthetic inhalations were only followed by momentary relief. The etherism, sometimes exciting cough and sense of suffocation, aggravated, for the time, the disease. The progress of the disease was not modified by their use, since he died on the fifth day from the beginning of the attack; the usual period at which the tetanic die.

In reflecting on the intense pain seated in the stump, it occurred to me, that direct etherization of the wounded surfaces might remove the painful impressions which were transmitted to the nervous centres, and cure the tetanus by removing the reflex action on the muscular system. It seemed to me that this local and direct etherization of the wounded surfaces would affect with anæsthesia the extremities of the sensitive nerves; interrupt the connection of those nervous extremities with their centres; deprive the nervous system of its painful participation in the suffering of divided parts; remove the muscles and the whole organism from the reaction which violent irritation in the incitor nerves produces: in a word, isolate the wound, by detaching it, so to speak, from animal life, without injuring its relations with organic life. This isolation, it appeared to me, might be obtained by the direct and continuous action on the wound of the vapors of chloroform or ether, without having to fear that the insensibility in the nerves would spread beyond the points immediately acted on by the anæsthetic vapor, that there would be danger from absorption, or that the stump, deprived of the reaction of the whole economy, might want the necessary irritation to carry it through its successive stages to cicatrization: since these vapors, which deprive the nerves of their functions, excite the rest of the tissues.

Experiments, with regard to the effect of local etherism on the lower animals and on man; but these are neither sufficiently numerous nor decisive to be yet brought forward.

Military Surgery—Gunshot Wounds—Appearance of the French Hospitals, after the late Insurrection. By Charles Kidd, M. D.—*The Dublin Journal of Medical Science, for August*, contains a letter from Dr. Kidd to its editor, describing the appearance of the French Hospitals, their management, the character of the injuries, the treatment, mortality, etc. etc., after the insurrection in June last; from which we extract the following interesting information.

The following is the official return of "killed and wounded" during these fearful days:—

Wounded, received from 23d to 28th June.—Civilians, 806; soldiers, *gardes mobiles*, and *gardes republiques*, 813; total, 1619.

Amount of Dead brought to Hospitals.—Civilians, 129; soldiers, *gardes mobiles*, and *gardes republiques*, 33; total, 162.

Total killed and wounded.—Civilians, 935; soldiers, *gardes mobiles*, and *gardes republiques*, 846; total, 1781.

One hundred and sixty-two dead corpses were brought to the doors of the hospitals to be recognised by their friends!—the Morgue, the usual place for such exhibitions, having been obliged to be closed up. Many of these dead bodies were mangled and shattered by cannon-shot, or torn by the cavalry horses. Of the wounded, fifty-three civilians and 104 *gardes mobiles* left again on having their wounds dressed, while 195 died within the first five days; leaving at the time of my attendance over 1400 cases, with some 300 or 400 in the temporary hospitals.

A feeling of sorrow seems to fill every one now in Paris for what has happened. Presents of lint and charpie are deposited at Notre Dame and other buildings, for the use of the sick. Even many of the ladies of the city offered their services, staying up at night with the wounded. A good deal has been said about poisoned balls, but, I believe, without any foundation. Many of those extracted were made of copper and zinc, and other unusual metals, but the wounds inflicted by them did not seem possessed of anything peculiar. The number of wounded in the hospitals at present far exceeds that of any other revolution. A somewhat singular suggestion has been mooted, that of M. Gannel, to embalm all those that fell during the four eventful days. It seems he has made an immense fortune by his process. He is to be seen every day at the Hotel Dieu, and has been worrying the Government about it. General Cavaignac has turned a deaf ear to the matter. In his great zeal, however, he offers to embalm republicans of every sort who may honor him with their confidence.

At La Charité, under Velpeau, and MM. Gerdy and Morel-Lavellec, were 115 wounded, which I took the trouble of classifying as follows:—Injuries of head, 8; thorax, 8; upper extremities, 34; abdomen, 13; lower extremities, 33; various minor injuries, 19.

Several amputations were performed. Other cases, though of a very grave character, were apparently doing very well under the ordinary treatment. In one case the ball went right through the popliteal space without injuring either nerves or vessels; in another, a man shot in the back of the head, the ball went out of the mouth: both were apparently doing well. In many instances the ball had gone through the shoulder-joint without any very manifest symptoms supervening. In another case a man was shot through the kidneys,—the ball making two openings,—actually broken in two on the bodies of the vertebræ. In another case, doing well, the entire foot was shattered by a cannon-shot. In another a very severe injury occurred in the track of the femoral vessels, without, however, any hemorrhage: the man seemed as if nothing had happened. The injuries of the lower extremities, were, indeed, almost beyond belief. In one singular case of injury of the head, the entire of the coverings

of the lower jaw had been swept away, leaving the cartilages of the larynx exposed; there seemed no unusual hemorrhage. In a severe injury of the upper extremity the ball traversed the upper part of the shoulder, wounding the spinal column, and producing a want of sensibility and motion; the poor man was alive simply because it had not gone one half inch higher, and cut off the origin of the phrenic. Another poor creature had received a bayonet thrust through his eye; another had a ball through both legs. In fact, every variety of horrid injury was to be seen. Amongst the newest ideas on gun-shot wounds is that of Velpeau, at La Charité, who has originated a classification and treatment of such lesions on the principle that they are analogous to burns. Every one knows the six degrees of burns of Dupuytren, and the treatment each will require. Velpeau states that the same thing holds in gun-shot wounds. The reparative process is the same; the symptoms the same; the treatment not very different. The ancients, I need scarcely say, held this doctrine till demolished by Ambrose Paré. Velpeau tells his class that the ancients were right; they saw the thing as a fact; but others came and built up a set of theories on it, that ultimately hid it from our view. The work of reparation, in many instances is certainly the same; perhaps the shock to the system also.

At Saint Louis Hospital, under Jobert and Malgaigne, I found the worst cases I had seen. Many of them are there yet, and some are very interesting subjects of study. This hospital is beautifully kept; several officers of the national guards and line were under treatment; and every facility is given to the pupils. Malgaigne in particular, an excellent surgeon, is wonderfully communicative. As at La Charité I classified the cases as follows:—Injuries of head, 25; thorax, 18; upper extremeties, 100; abdomen and pelvis, 20; lower extremities, 142; minor injuries, 15.

Some of the wards are under the care of M. Gosselin, and contain exceedingly bad cases; one, an entire destruction of the thigh by cannon-shot, with fracture of the femur; another, a frightful crushing of the hand; several injuries of the most desperate kind of the lower extremities; one, a ball in the track of the ascending colon and gall-bladder without any very bad symptoms.

Under the care of Malgaigne I saw two cases in particular of extensive injury of the shoulder-joint; mortification in one, removal of the extremity at the joint in another. There were crowds of instances of balls through and through limbs without any bad effects. In amputating I think the French surgeons do not clean the bone as we do in this country. The thing is done in an instant, but I am quite satisfied not so well as it might be. Whether on account of the hurry of the operation, or the change worked by chloroform, I do not know, but I had seen the most formidable operations also performed without removing the patient to the operating theatre. If the operation can be well done under such circumstances, perhaps it is an improvement, as so much of the strength of the patient as would be lost by removal is husbanded. The process of "chloroformizing" is not managed as well as I have seen it at home; the patient is merely allowed to smell the vapor for some time. Speaking of this powerful agent perhaps I may say it is at present, in some institutions in Paris, somewhat under a cloud, from the many deaths that have occurred from its use there and elsewhere. The chloroform bottle is, however, carried about the hospitals as regularly as the other *armamenta medicaminum*. In one ward of St. Louis, for instance, we came to a desparate case of injury of the leg; Malgaigne called for the chloroform bottle while visiting the beds next it; the poor man was prepared for his fate, put under the effects of the anæsthetic, and on the return of Malgaigne settled for amputation. An assistant compressed the artery. The knife was run through over the bone; a large flap down to the patella was formed in a second; a sea of thick, grumous, pus-like matter followed; the bone was at once sawed through without any effort to save more flesh, the flap being somewhat limited; a large vermiform clot was taken out of the vein; the chief artery tied, and the rest left to the assistants.

Not a word was spoken all the time; Malgaigne seemed as collected and cool as if it were any ordinary case, and passed on to the other end of the ward. Scenes like this are of hourly occurrence, and during the first few days of the insurrection were even still more frequent. I am quite aware that there is nothing very remarkable about removing a limb now-a-days. I think, however, that any one anxious to see what the system will bear in that way, or the other fearful injuries it will still battle against without any obvious effect, will find a rich field for study among the hospitals and ambulances of Paris for the next two months. With few exceptions, everything is left to the *vis medicatrix naturæ*,—the expectant system of the French, which, if not exactly the best, is, perhaps, superior to the opposite one so common elsewhere. Indeed any one anxious for a proper conclusion as to what may be left to nature and what not, cannot fail to find it in the Paris hospitals.

At the Hotel Dieu, in the ten days preceding the 2d of July, 450 wounded were received. In the wards of Roux, of 127 wounded, 25 died almost immediately; 100 of these were cases of penetrating wounds of the abdomen, in one of which the liver must have been pierced; two cases in which the lungs were wounded; several other injuries of the chest and upper extremities; one very fearful case, in which the man was shot through the loins, the ball traversing the bodies of the lumbar vertebræ, producing retention of urine, paralysis of motion, and *not* of sensation, in the lower extremities: death after four days. 31 Quitted the hospital cured, leaving at the time of my visit the following under the care of Roux:—Injuries of the head, 11; thorax, 1; upper extremities, 23; abdomen, 2; lower extremities, 28; total, 73.

Under the care of MM. Manec and Voillemier:—injuries of the head, 7; thorax, 5; upper extremities, 26; abdomen, 7; lower extremities, 29; minor injuries, 3: total, 77. 150 in all.

In the extraction of balls the French surgeons use a great deal of discrimination, and believe that in making counter-openings, and unnecessarily enlarging the original wound, ought not to be practised; that, like the abuse of the trephine, the means of cure may lead to worse effects than the first injury, and that we should *wait for symptoms*. Two very ingenious instruments have been invented for getting at balls; like all such nice things, however, they are seldom used. One termed the "*Alphonsin*," differing little from the lithotrity instrument, we are all familiar with at this side of the channel; the other, a little more complex, and containing a sort of cork-screw addition for fixing the ball and drawing it away. From the circuitous direction of balls in general, it is quite obvious what little use such instruments can be.

At the *Maison de Sante* 90 were admitted; of these, 8 were severe penetrating wounds of the chest,—many of them doing well after repeated bleedings. It was somewhat curious to witness the apparent want of symptoms in several patients here, though the most vital parts were evidently implicated. In one man the ball had gone through the spine of the scapula, fracturing that bone, and giving obscure evidences of its presence in the chest: after two bleedings he appeared recovering. In another case, though the ball had gone through and through the chest, injuring all the parts at the base of the lung, no bad symptoms had presented themselves. The worst appearances, however, may be a work of time; the immunity from pain or constitutional disturbance, so soon after the receipt of the injury, being a little fallacious. Much of it, however, I would be inclined to ascribe to the assiduous attention shown the patients, and the quickness with which any inflammatory aggression is subdued by bleeding. A *garde mobile* suffered under a wound of the head for some days; the brain was quite perceptible; reduced to a reddish pulp, it seemed insensible; pulsating as usual. He did not complain of anything unusual either, but died four days after. At this little hospital, out of 90 admitted during the insurrection, amputations were performed eight times.

At one of the temporary hospitals I found 75 wounded, of the ordinary character of cases: there were only a few about which there was anything pe-

culiar. One man received a ball at the external angle of the eye, which entered deeply into the face: there seemed no bad symptoms. I should say, however, the commissure of the optic nerve had been injured. *He was blind of both eyes.* Several instances of injuries of the chest presented themselves, where the ball had gone round nearly the entire thorax without entering: these patients were recovering. One, indeed, in which the ball had to all appearances entered the chest, had got severe inflammation of both lungs and pleura; much fear was entertained for his life. In one of the beds a poor fellow, surgeon of one of the regiments of the line, elicited much sympathy. In no way daunted by the crash of barricades, he remained with his regiment till struck by a ball, which shattered the lower end of the femur, going through the knee-joint. The poor fellow seemed quite collected, and great hopes were entertained for his recovery.

At Val de Grace, a military hospital under the care of M. Baudens, something over 100 patients, many of them very severely wounded, were received. The treatment seemed to differ little from that in the other hospitals; refrigerants, to keep down inflammatory action (ice, cold water, &c.), purgatives and bleeding, where necessary; and attention, the most assiduous, to changes as they occurred. Fomentations of various kinds, when suppuration set in, and other matters, as the cases might require. M. Baudens does not seem a great advocate for amputation. He had operated, however, fifteen times after the days of June. 16 patients had sunk from the effects of their wounds. The remainder were progressing favorably. Of the number in this hospital, I made the following classification:—Injuries of head, 12; thorax, 6; upper extremities, 35; abdomen, 8; lower extremities, 47; minor injuries, 15; total, 123. A somewhat singular case occurred here, that of a young soldier, in which the ball impinged on the eye, producing a contusion of the eye-lids and cornea merely, to all outward appearance with little constitutional symptoms, but in whom the shock to the eye caused complete blindness! Here, as everywhere else, one sees the different character of the cases, among the well-fed military, and the but too often wretched *ouvriers*. Several of the latter were attacked with gangrene. The treatment in all the hospitals is, perhaps, a little too general; what is ordered for a stout *mobile* being likewise ordered for a starving insurgent. All these injuries not requiring amputation are treated by cold applications, and venesection, if necessary, followed, after reaction, by emollient cataplasms. There is very little cutting or enlarging of wounds, and a great deal is left to Nature. The relative mortality will, perhaps, prove whether this or the opposite system is to be preferred. In two of the worst cases of wounds of the chest here, the operation for empyema had to be performed.

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MIDWIFERY AND DISEASES OF FEMALES.

Placentitis Occurring Twice in the same Woman.—Dr. Van Hengel attended a woman, thirty-three years of age, who was delivered of a child, of whose death there had been distinct signs three weeks previously. The fœtal portion of the placenta had degenerated into a grayish-white color; on the uterine surface it was still spongy and porous in several spots. Two years afterwards the woman was again near the time of her delivery. She stated that between the seventh and eighth month she had had a slight attack of fever, after which she was seized with severe pain in the right side of the abdomen, in which part she felt as if there were a weight lying within her; at the same time she suffered from thirst, sleeplessness, headache, and loss of appetite. Subsequently she was troubled at various times with bloody, watery, and purulent discharges from the vagina. The pulsation of the fœtal heart could not be heard, nor could any movements of the child be felt by the mother or her medical attendant; and at the same time she complained of

nausea and a sensation of cold in the belly. Some days after, she was delivered very quickly of a child which appeared to have been long dead. The placenta was circulur, curled inwards at the edges, grayish-yellow in color. On the fœtal surface it was dark-brown or almost black; and it was so indurated as not to bend when held out by one point.—*Med. Times.*

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Successful Removal of an Ovarian Tumor complicated with Pregnancy. By H. E. Burd.—The patient was a woman about 25, the mother of three children. The history of the case, and character of the tumor, showed it to be ovarian disease. The measurement over the umbilicus was 45 inches, and from the ensiform cartilage to the pubes 22 inches. Her dyspnœa was urgent, and she was unable to lie down. There was nothing to indicate the existence of pregnancy. It is unnecessary to describe the mode of performing and the steps of the operation. Notwithstanding the extent of the incision, it was found necessary to pass a trocar into the largest cyst; from which three gallons and a quart of fluid were drawn of, reducing the tumor to a convenient size for passing through the aperture. On drawing the tumor forward, so as to examine its pedicle, the uterus was brought into view in a gravid state, and was supposed to have reached the third or fourth month of pregnancy. The operation was performed on the 15th of September. On the 17th abortion took place; the labor was easy, and the child was born alive. No hemorrhage ensued, and the woman bore her labor better than could have been expected. The frequent occurrence of collapse was the most important and alarming symptom after the operation, requiring opium, ammonia, and brandy. The absence of peritoneal inflammation was remarkable. On October 8th, three of the ligatures came away. On November 6th, the wound was quite healed, and the patient able to walk about.—*Med. and Surg. Jour.*

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A Dicephalous Monster with one head black and the other white. (*Lon. Med. Gaz.*) M. Prus has recently addressed to the Medical Society of Paris, a communication on a singular case of monstrosity, which occurred at Alexandria. The monster, which was born dead, had two heads attached to one trunk. The heads were well formed: one was white, and appeared to correspond to about the eighth month of uterine life; the other was black, of larger size, and had apparently reached maturity. In other respects, the child, which was a male, was normally developed. The shoulders, trunk, and upper and lower extremities were white. The nails were imperfectly formed, and resembled those of an immature child. The alteration in the color of the skin commenced about the level of the neck of the black head. It was here brown, becoming gradually deeper, and passing imperceptibly to a deep black, extending over the whole of the head and face. M. Prus made a careful examination, and satisfied himself that the change of color was not owing to any nævus, sanguineous congestion, or other morbid condition. When the epidermis was removed, there was a thick layer of pigmentum nigrum in the mucous tissue of the skin. He therefore referred this head to the negro-type—an inference which was justified by its form and general aspect. The parents were *fellahs*—the mother was from 25 to 30 years of age; and the father about 30, a laborer in the port of Alexandria. Like all individuals of this tribe, they had a brown skin, with a yellowish tint. The woman died soon after her delivery: she had previously had five well-formed children, of whom four had been born dead.

The physiological questions which arise in respect to this monster are difficult of solution. Did the two heads belong to different types, fellah and negro? Is it a case of superfœtation in which two ova have been separately fecundated, the one by a negro, and the other by a white; the ova becoming fused with the exception of the two heads? If this were the case, it is difficult to understand why some portion of the skin of the trunk and extremities should not have been equally black. M. Prus remarks, that there are negro laborers

in the port of Alexandria, but he could not ascertain whether the mother had had intercourse with one of that race. A committee has been appointed by the Society, to draw up a report upon this very remarkable case.—*L'Union Medicale.*

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On Vomiting During Pregnancy. (*Brit. Rec. of Obs. Med.*)—Dr. Churchill has published the particulars of two cases of obstinate vomiting attending pregnancy, where many migivings and doubts were entertained. The first was a patient under the care of Drs. Maguire and Churchill, who was seized about the eighth week of her third pregnancy, with severe sickness. In order to alleviate it opium, effervescing draughts, prussic acid, creasote, aperients, ether, lime-water, lemon-juice, ice, together with bleeding, leeching, sinapisms, fomentations, &c., were successively resorted to but without relief. The vomiting continued most obstinately until she became emaciated to almost a skeleton. On the 16th of October Dr. C. gives the following report of the case:

Vomiting incessant all day, and distress inexpressible. On my visiting her, I found her far worse than I had ever seen her, and I really cannot convey by words her agony. When not actually vomiting she suffered more torture from nausea; she lay tossing about in the bed or suddenly throwing herself out of bed, and would roll about on the floor. Her sighs and groans were mingled with shrieks and petitions for relief. Her face was haggard, her eyes sunken and surrounded by dark circles; her body was little more than skin and bone; her stomach retained nothing for a moment; the pulse at 130, and very weak. Occasional suffocation distressing. We heard the interior souffle, but could not hear the fœtal heart. Ordered a little brandy and water. Hoffman and valerian and the anodyne enema at bed time. 17th.—Vomiting dreadfully all night and day, nothing whatever remaining on her stomach; great debility and emaciation; perceptibly weaker each day; pulse 130, very weak. Teaspoonful of brandy and water every hour, and chicken-broth. Opium suppository at night. 18th.—Worse than ever; in such agony as I never before beheld; pulse 130; has taken no food, and is utterly exhausted; placental souffle heard, but not fœtal heart. As no medicine afforded any relief, and as each attack had been worse than the preceding, and as her condition appeared to us to be one of imminent danger, it was clear that some change of plan must be made immediately.

We had tried bleeding, leeching, blistering, opium in several forms, antispasmodics, lime-water, acids, calomel, creasote, prussic acid, stimulants of various kinds, without any apparent benefit, for though the sickness subsided twice, it did not appear to be the direct effect of medicines. On the other hand, the want of food and the constant irritation of nausea and vomiting, had utterly exhausted the patient. She had little or no sleep for five nights; had not retained a particle of food; the pulse had long been 130, and now was rapidly becoming weaker. She was utterly helpless; less restless than before from sheer weakness; her countenance was drawn and sunk; in short, we could no longer doubt that another week of such suffering would end fatally for our patient. Under these circumstances, after most anxious reflection and consultation, and with a painful sense of the responsibility, we decided upon bringing on premature labor, unless some decided change had taken place, at our visit next day. 19th.—So far from any improvement, our patient appeared to be rapidly getting worse; I therefore gave her 40 grains of recently powdered ergot of rye, which she retained three quarters of an hour, but which produced no effect. It was repeated an hour after, and again vomited. As it appeared to increase the burning pain at her stomach, without appearing to act upon the uterus, no more was given. In the evening, she was lifted on the sofa, and whilst there, there was a gush of about a pint of fluid (liq. amnii) from the

vagina, with some slight pain. 20th.—No rest during the night, and no pains. Desirous to avoid repeating the ergot, I passed a bougie into the uterus this morning, and on October 21st, it was evident that the liquor amnii had escaped, as no fluid followed the introduction of the bougie, nor did uterine contractions come on. We were now greatly distressed: we wished to avoid giving up, and yet, the introduction of the bougie had been ineffectual, and our patient was palpably sinking. During Oct. 21, we endeavored to keep up her strength by brandy and water and chicken-broth, but with little success. 22d.—As we had no other means at command, we determined again to try ergot. Two doses were given, and though they added to the discomfort of the stomach, after the latter we found distinct uterine pains coming on at intervals during the day and night, but the vomiting, fainting and exhaustion, rather increased. The stimulants were continued. 23d.—Uterine pains continued at intervals during the day, though slight; prostration excessive—in fact, her friends thought her dying; pulse 160; nothing remains on the stomach. A stimulating injection was given. 24th.—Remained in the same state during the day, but at night the pains increased in frequency and strength, and at 4 A. M., October 25th, a macerated fœtus, with the secundines, was expelled without hemorrhage. She vomited twice that day, and once the next morning, but never afterwards. She now took nourishment, and in a fortnight was perfectly convalescent.

I have entered into this lengthened detail, that you might see the wretched state to which the patient was reduced, the fair trial which the usual medicines had, their failure, and to acquit us of rashness in having recourse to the only means left to save life. That we waited long enough, there could be no doubt; there was a misgiving in our minds for some days, that we had waited too long; but the result disproved this, and afforded us boundless gratification.

P. S. Since the first part of this paper was published, another case has occurred to me, not less remarkable and instructive, though the result has been less favorable.

On the 12th of December I was requested by Mr. Young, of this city, to visit Mrs. S. with him. She was above forty years of age, had borne six children, and was in good health up to seven weeks ago, when she was attacked with severe dysentery, which after the usual treatment, subsided, or rather was superseded by incessant vomiting. For the last few weeks she had retained nothing on her stomach, and was in consequence reduced to the greatest degree of weakness and exhaustion. The emaciation was excessive, and she was literally skin and bone. She was confined to bed, and suffered great agony from retching both night and day; her pulse was 120, and so weak as to be barely perceptible. I carefully examined every organ of the body, but could find no disease. I thought I could discern a fulness over the pubes, and I asked her if she were pregnant. She did not think so, although her catamenia had been absent four months, and certainly she had corroborative symptoms. Upon anxious consideration of the case, however, I still inclined to the belief that she was in the family way, and as all the usual remedies had been tried by Mr. Young without success, I proposed to pass a bougie into the uterus for the purpose of bringing on abortion, if she were pregnant. This I did on the 15th of December, but no liq. amnii escaped, and my fears as to the correctness of my diagnosis and the result to our patient were great, for it was quite evident that in her present circumstances she could not live a week. I inserted into the os uteri a small roll of lint, and left at three, and on my visit the next day I found a fœtus of three months lying on the bed. Labor came on in the morning, and she was delivered without much suffering, and without hemorrhage. The fœtus was macerated, and had evidently been dead for some time, which accounted for the absence of stethoscopic signs of pregnancy.

From this moment the vomiting ceased, she took proper nourishment, and for two days made a favorable progress; but she was then attacked by obstinate and continued diarrhœa, which resisted every remedy, and under which

she sank about six days after delivery. This case is of great interest in these particulars. 1st,—As affording another example of a patient reduced to the verge of death by the vomiting of pregnancy. She was worse when I first saw her than the case I have just related, although the vomiting had not continued so long. 2d,—The diagnosis was unusually difficult.

The patient was near the age at which menstruation ceases: did not believe herself pregnant, had no other symptom but the absence of the catamenia, and the vomiting; and the attack had come on at the termination of dysentery. 3d,—The success of the operation was perfect as regards the vomiting. She took food and drink immediately after delivery, and never vomited again. But we find that we may not defer the operation beyond a certain point without danger. When I saw this patient, she was so much reduced that she could not have lived another week, but this state of exhaustion rendered an attack of diarrhœa fatal, which might have been borne very well had she been stronger. Had I seen her sooner, I have scarcely a doubt that she would have recovered.

MISCELLANEA.

Number of Medical Students in the Medical Schools of France and Spain.—(*Med. Gaz.*)—It appears from official documents, that the number of medical students in the schools and colleges of France is 1875, of whom there are in the faculty of Paris 800, in that of Montpellier 175, and of Strasburg 77. The remainder are pretty nearly equally distributed among twenty other minor schools in the provinces. In Spain, with a much smaller population than France, the number of medical students is said to be much greater. Thus, in Madrid, there are 1100, and in the united schools of Barcelona, Cadiz, and Santiago, there are no less than 400, making a total of 1500 students.

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Urea, a Natural Ingredient of the Blood.—An experiment recently performed by J. C. Strahl, would seem to prove that urea may exist in the blood in its ordinary healthy condition. Having abstracted four ounces of blood from a dog, he treated it with three times its volume of pure alcohol, and having separated by filtration the coagulum which formed, he concentrated the whole extract by evaporation, and then added to it an aqueous solution of oxalic acid. On examining the mixture with a magnifying power of eighty diameters, he detected in it distinct crystals of oxalate of urea.—*Heller's Archiv*, 1848.

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Claims of Hunter on the Admiration of Posterity.—Some physiological writers, in considering the claims of Hunter to the admiration of posterity, have not hesitated to affirm that the facts accumulated by his industry will constitute the basis on which his fame will ultimately repose; and that these will remain when his speculations will be forgotten. These strange assertions render it desirable to show that it is precisely these depreciated speculations, or rather, as in justice they ought to be termed, these splendid generalizations, touching the relations and laws of vital forces, which have now, as they will hereafter have, the highest claims to the notice and the admiration of the student in physiology. That some of these views were, from their character, difficult of apprehension, and that others were obscured by an infelicity of language, may be readily granted; but it must not be forgotten, that science sustained the irreparable loss of never having the collected and elaborated conceptions of Hunter's genius on some of the highest subjects that can engage the human mind. —*Mr. Grainger's Hunterian Oration.*

Tape-worm in Fish.—M. Ancelon mentions the singular fact, that in lately examining a small fish, known under the name of *rousse*, he found a tænia about eleven inches in length, precisely resembling the entozoon found in the human intestines. The only difference was, that the head instead of terminating in a long and very narrow neck, ended in a point which the animal could elongate or contract at will. He was unable to discover any trace of a mouth.

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Detection of Human Skin by the Microscope.—At a recent meeting of the Microscopical Society of London, Mr. John Quekett, the microscopic demonstrator to the Royal College of Surgeons, read a very interesting paper on the importance of the microscope in the determination of minute structures of a doubtful nature. The author stated that his object in bringing this communication before the Society, was to point out how minute portions of skin, which had been exposed to the air for centuries, could be recognised as human. There existed in this country certain traditions, that persons who had committed sacrilege were flayed, and their skins nailed to the doors of the churches they had robbed, as a terror to the sacrilegists; and three portions of such skin had been forwarded to the author, for examination, by Albert Ray, Esq., the Secretary of the Archæological Society. The first was taken from one of the doors of Worcester Cathedral, where now only portions remain underneath the ornamental clamps and hinges. The second specimen was taken from the church-door of Hadstock, in Essex, where it had been protected, for many centuries, by an iron-grating: this portion of skin was said to have been that of a Danish pirate, and is supposed to be nearly 900 years old. The third specimen was taken from the church-door of Copford, also in Essex. On all the specimens Mr. Quekett succeeded in finding two or three hairs, which the microscope clearly proved to be human. Thus this valuable instrument is able to confirm a tradition, and prove the former prevalence of a practice which had been doubted by many archæologists.—*Lon. Med. Gaz.*

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M. Raspail and Medical Democracy.—M. Raspail, whose name has been for some years known to chemists, is about to be tried on a charge of conspiracy against the National Assembly. He took an active part in the insurrec- of Barbès on the 15th May, and caused himself to be nominated President of the red Republic (the Republic of blood!) As a specimen of the sort of liberty to be accorded to the medical profession by the triumph of ultra-democratical principles, we here quote the sketch of a decree found among the papers of this liberal *savant*:—

Considering that the first right of the people is that of entrusting the care of its health to whomsoever it pleases, it is decreed.—

1. That the laws, decrees, and regulations, concerning the teaching and practise of medicine are entirely abolished.

2. That the titles and diplomas conferred by these laws, decrees, and regulations, are declared null and void.

3. Every citizen has a right to attend patients, and to obtain for such attendance a proper remuneration.

M. Raspail was himself convicted and punished for the illegal practice of medicine shortly before the revolution; hence it is not surprising that a scientific citizen of his stamp, should wish to overthrow laws which had interfered with what he considers to be a legitimate mode of gaining a livelihood—*i. e.*, by the open practice of quackery among the poor and ignorant!—*Lon. Med. Gaz.*

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University College, London. The London Medical Gazette for August 18th contains the following remarks upon the recent difficulties which this College has experienced in the appointment of Professors to the vacant chairs of Surgery, Clinical Surgery, and to the offices of Surgeon and Assistant Surgeons.

It is with great satisfaction we can announce that the surgical appointments at University College have been at length filled up in a manner which reflects credit upon the Council. The dissensions which have so recently occurred, were calculated to damage the character of the College as a place of instruction; but happily these have been healed by a judicious selection of new men; and there is now every prospect that the October session will be opened under the most favorable auspices. As we announced in our number of the 28th ult., Mr. J. M. Arnott, whose high reputation as a practical surgeon is so well known to the profession, has accepted the office of Surgeon to the North London Hospital, and Professor of Surgery in University College. In making this appointment, it cannot be imputed to the Council that they have adopted the practice of "sending for strangers," or that they have selected an untried man, or one whose reputation had yet to be made. Mr. Arnott, by his long connection with the Middlesex Hospital, has become completely identified with the profession of the metropolis; and by his high standing as a surgeon, he cannot fail to perform the duties of his office with credit to himself and benefit to the pupils of the College. Upon the propriety of this appointment, and the judgment of the Council in making it, there cannot, we think, be one dissentient voice. Mr. Richard Quain takes the Professorship of Clinical Surgery; and Mr. Morton holds the office of Surgeon to the Hospital. Mr. J. E. Erichson and Mr. Marshall have been appointed Assistant Surgeons. It was not probable that the last-mentioned appointments could be made without exciting some feeling of discontent. Every disappointed candidate will of course condemn the Council for excluding himself; but there is good reason to believe that the appointments have been made with a proper regard to the claims of pupils, and to the interests of the College. Of Mr. Marshall's qualifications we are unable to speak; but of those of Mr. J. E. Erichsen there can be only one opinion. His name has been before the profession for some years. His essay on asphyxia, on burns and scalds, and on diseases of the skin, of which the two latter were published a few years since in the pages of this journal, are sufficient to show that he is not only an original thinker, but a man possessed of a good practical knowledge of his profession.

From this statement, our readers will, we think, agree with us that the Council of University College have done all that is in their power to restore harmony to the school. We feel ourselves in a position to express an unbiassed opinion on this subject, as during the late discussion we avoided making this journal an organ of party feeling, and declined allowing any personal attacks or rejoinders, anonymous or otherwise, to appear in our pages.

OBITUARY.

Death of Baron Berzelius.—This distinguished chemist, the father of analytical chemistry, expired on the 7th of August, at Stockholm. Baron Berzelius was born on the 20th of August, 1779, in Ostergothland, in Sweden, of a respectable family. At the age of 17 he entered the University of Upsala, where he made a rapid progress in his studies, particularly his favorite science —chemistry; after passing the necessary examinations, he received his diploma of Doctor in Medicine in 1804, and was appointed Medicinæ et Pharmaciæ Adjunctus at the Collegium Medicum at Stockholm, and gave instruction in chemistry to young students, and, on account of his small income, was obliged to practise occasionally as a physician. In 1807 he was appointed Medicinæ et Pharmaciæ Professor, and in the same year he instituted, in conjunction with seven other eminent men, the Swedish Medical Society at Stockholm, now a most flourishing institution, and constituting the very heart of the medical profession in Sweden.

In 1808 he was made a member of the Royal Academy of Science, in 1810

officiated as president, and in 1818, as perpetual secretary. On the occasion of holding this appointment for a quarter of a century, a dinner was given in the Academy by the members to this distinguished *savant*, which was presided over by his present majesty, then the crown prince, who, on proposing the health of Berzelius, expressed his grateful acknowledgment of his own obligations to Berzelius for the valuable private instruction he had received from him in his younger days. In the same year he was appointed a member of the Royal Sanitary Board, of which, at the time of his death, he was the senior member. As a proof of the magnitude of his laborious pursuits, it may be sufficient to mention that he first developed the electro-chemical system, and that he has also examined and minutely described the atomic theory of the elementary bodies. He discovered and examined several great classes of chemical combinations, as, for instance, the different degrees in which sulphur combines with fluoric acid, with platinum, columbium, vanadium, tellurium and phosphorus, the sulphates, &c. In organic chemistry he has no less distinguished himself by his experiments; and, properly speaking, he has laid the foundation of vegetable and animal chemistry; more particularly the latter. As regards chemical analysis, the highest merits are due to him, for having arranged a new and generally-adopted chemical nomenclature. His works, which have been for the most part translated into the English, French, German, Italian, Spanish and Polish languages, are so numerous and voluminous, that, considering the accuracy with which every thing is described, it appears to be almost a wonder how one man, whose time, besides, is occupied by a great amount of official duties, has been able to accomplish such a mass of scientific publications.

Berzelius had received from his Majesty King Charles John many marks of high distinction: he was created a nobleman in 1818, a Baron in 1835, Knight Commander of the Royal Order of Wasa in 1821, and Grand Cross of the same order in 1829; he was a Knight of the Royal Swedish order of the Polar Star, and of several foreign orders received from the Emperor of Russia and the Kings of Prussia, Denmark, Belgium, France and Sardinia; an honorary member of upwards of one hundred literary and scientific societies. In consideration of the great services which Berzelius had bestowed on his native country, the members of the Diet at Stockholm, in 1840, voted to him the annual sum of 2000 dollars banco as a pension for his lifetime, independent of his former emoluments.

The Edinburgh Journal of Science and the Philosophical Magazine, to which we are indebted for these particulars, state, as showing how high the illustrious deceased ranked in Germany, that in a late history of the Devil, of which so many are published in that country, one of the main inducements his Satanic majesty is represented as holding out to a convert, still half doubtful of selling himself, is, that he will make him *a Berzelius.—London Lancet.*

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